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**PIEDMONT  
TECHNICAL  
INSTITUTE**

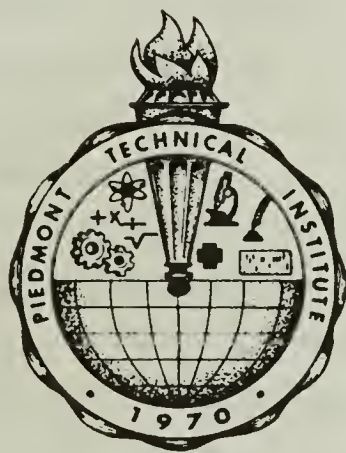
ROXBORO, N. C. 27573

THE SYSTEMS APPROACH INSTITUTION



72-74

CATALOG



A NEW WORLD  
THROUGH UNDERSTANDING

# PIEDMONT TECHNICAL INSTITUTE

ROXBORO, N. C. 27573

# PIEDMONT TECHNICAL INSTITUTE

ROXBORO, NORTH CAROLINA 27573

## GENERAL CATALOG

1972-1974

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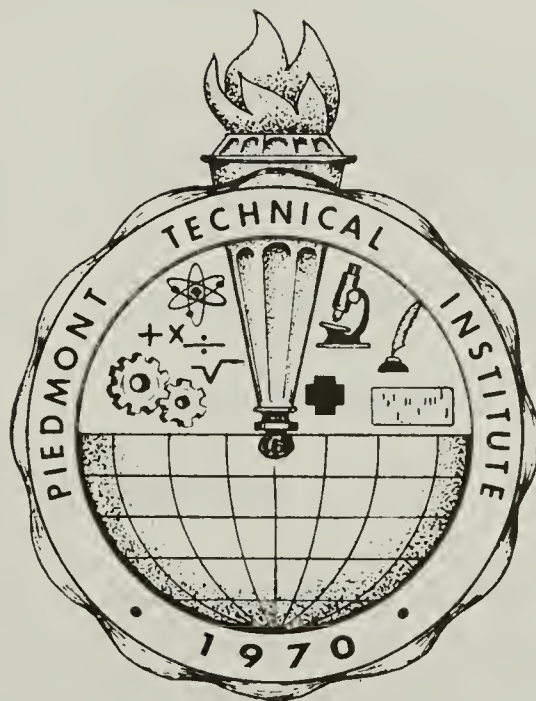
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# INTRODUCTION



THE SYSTEMS APPROACH INSTITUTION  
WHERE YOU LEARN AT YOUR OWN RATE



## PIEDMONT TECHNICAL INSTITUTE

## School Calendar

1972 - 1973

## SUMMER QUARTER

Classes Resume	Thursday, June 8, 1972
Independence Day Holiday	Monday, July 2, 1972
Last Day of Summer Quarter	Thursday, August 24, 1972
Graduation Exercises	Friday, August 25, 1972

## FALL QUARTER

Registration and Orientation	Tuesday, September 5, 1972
Classes Resume	Wednesday, September 6, 1972
Classes Suspended At 3:00 P.M. For Registration	Tuesday, November 21, 1972
Registration For Winter Quarter, 3:00 to 5:00 P.M.	Tuesday, November 21, 1972
Thanksgiving Holidays Begin 5:00 P.M.	Wednesday, November 22, 1972

## WINTER QUARTER

Classes Resume	Monday, November 27, 1972
Christmas Holidays Begin	Wednesday, December 20, 1972
Classes Resume	Wednesday, January 3, 1973
Classes Suspended At 3:00 P.M. For Registration	Friday, February 23, 1973
Registration For Spring Quarter, 3:00 to 5:00 P. M.	Friday, February 23, 1973

## SPRING QUARTER

Classes Resume	Monday, March 5, 1973
Easter Holidays Begin	Thursday, April 19, 1973
Classes Resume	Thursday, April 26, 1973
Classes Suspended At 3:00 P.M. For Registration	Friday, May 25, 1973
Registration For Summer Quarter, 3:00 to 5:00 P. M.	Friday, May 25, 1973

## PIEDMONT TECHNICAL INSTITUTE

## School Calendar

(Proposed)

1973 - 1974

## SUMMER QUARTER

Classes Resume	Thursday, June 7, 1973
Independence Day Holiday	Monday, July 2, 1973
Last Day of Summer Quarter	Thursday, August 23, 1973
Graduation Exercises	Friday, August 24, 1973

## FALL QUARTER

Registration and Orientation	Tuesday, September 4, 1973
Classes Resume	Wednesday, September 5, 1973
Classes Suspended at 3:00 P.M. for Registration	Tuesday, November 20, 1973
Registration for Winter Quarter, 3:00 P.M. to 5:00 P.M.	Tuesday, November 20, 1973
Thanksgiving Holidays Begin 5:00 P.M.	Wednesday, November 21, 1973

## WINTER QUARTER

Classes Resume	Monday, November 26, 1973
Christmas Holidays Begin	Wednesday, December 19, 1973
Classes Resume	Wednesday, January 2, 1974
Classes Suspended at 3:00 P.M. for Registration	Friday, February 22, 1974
Registration for Spring Quarter 3:00 P.M. to 5:00 P.M.	Friday, February 22, 1974

## SPRING QUARTER

Classes Resume	Monday, March 4, 1974
Easter Holidays Begin	Thursday, April 11, 1974
Classes Resume	Thursday, April 18, 1974
Classes Suspended at 3:00 P.M. for Registration	Friday, May 24, 1974
Registration for Summer Quarter 3:00 to 5:00 P. M.	Friday, May 24, 1974



## BOARD OF TRUSTEES

Gordon P. Allen, Chairman

State Senator, 11th Senatorial District

Partner, Thompson-Allen Insurance Company

D'Arcy Bradsher

Vice President, Central Carolina Bank

R. D. Bumpass

Partner, B & J. Ford Motor Company

Henry Eily

Assistant Principal, Person Senior High School

W. H. Green

Division Controller, Collins and Aikman Corporation, Cavel Division

Mrs. Mildred Henderson

Homemaker

Smith N. Knight

Principal, Southern Junior High School

J. Henderson Munday

Owner & Manager, Munday's Welding & Machine Shop

Harry Phipps, Vice Chairman

Vice President of Manufacturing, Crown Aluminum Industries Corp.

Mrs. Rosemary Pollock

Instructor, Mathematics Department, Person Senior High School

Neal F. Rattican

Editor, Courier-Times

Dr. David W. Rogers

Assistant Superintendent, Person County Schools

ADMINISTRATION AND STAFF

- Craven H. Sumerell . . . . . President  
B.A., Atlantic Christian College  
M.A., East Carolina University  
Graduate Study, Mississippi State University  
Ed. D. Candidate, Duke University
- Otto J. Blumenstein . . . . . Educational Development Officer  
B.S., University of Maryland
- Fred L. Myers . . . . . Director of Fiscal Affairs  
B.S., Wake Forest University
- William D. Tyndall . . . . . Director, Student Personnel Services  
B.S., Wake Forest University  
M.A., East Carolina University
- T. Earle Johnson, Jr. . . . . Curriculum Development Specialist  
B.S., University of Alabama  
M.B.A., University of Alabama  
Graduate Study, University of North Carolina-Chapel Hill
- M. Tony Bledsoe . . . . . Curriculum Development Specialist  
B.S., Atlantic Christian College  
M.A., Appalachian State University
- Melvin C. Bright . . . . . Curriculum Development Specialist  
B.S., N. C. State University  
M. Ed., N. C. State University  
Graduate Study, East Carolina University
- James C. Avery . . . . . Director, Off Campus Programs  
B.S., East Carolina University  
M. Ed., Middle Tennessee State University
- Billy O. Hockaday . . . . . Coordinator, Adult and Continuing Education  
B.A., Atlantic Christian College
- John C. Dawes . . . . . Adult Education Coordinator  
B.A., University of North Carolina-Chapel Hill  
Graduate Study, Stetson University and Morehead State University
- Chen Fan . . . . . Librarian  
B.A., Tamkang College of Arts and Sciences  
M.A., Appalachian State University  
Ph.D. Candidate, Duke University
- Mrs. Patsy D. Allen . . . . . Registrar  
Wake Forest University
- Mrs. Linda Raper . . . . . Bookkeeper  
A.B., Atlantic Christian College

Mrs. Shirley A. Wood . . . . . Secretary, Student Personnel Services

## TEACHING FACULTY

Mrs. Leona P. Aldridge . . . . . Cosmetology

Alamance Beauty College  
University of South Carolina  
Wake Forest University  
Licensed Instructor, North Carolina State Board of Cosmetic Arts

James C. Avery . . . . .	Business Administration
. . . . .	Occupational Extension

B.S., East Carolina University  
M.Ed., Middle Tennessee State University

M. Tony Bledsoe . . . . . Business Administration  
 . . . . . Occupational Extension

B.S., Atlantic Christian College  
M.A., Appalachian State University

Jerome E. Branche . . . . . Teacher Assistant

A.B., Shaw University  
M.A., New York University

Mrs. Annie C. Brandon . . . . . Teacher Assistant

State Teachers College, Longwood, Virginia  
University of North Carolina-Chapel Hill  
University of Virginia  
Wake Forest University  
N. C. State University

Mrs. Hazel C. Breeze . . . . . Teacher Assistant

Mars Hill College  
A.B., Meredith College  
M.A., University of North Carolina-Chapel Hill

Melvin C. Bright . . . . . Agricultural Science  
 . . . . . and Mechanization

B.S., N. C. State University  
M. Ed., N. C. State University  
Graduate Study, East Carolina University

Mrs. Lois H. Brooks . . . . . Teacher Assistant

A.B., East Carolina University

Mrs. Agnes B. Browning . . . . . Teacher Assistant

B.S., A & T State University  
M.A., A & T State University

James W. Cates . . . . .	Agricultural Science and Mechanization
--------------------------	---

B.S., N. C. State University

Leroy Culley . . . . . Welding

Certified Welder, State of North Carolina



John C. Dawes . . . . . Adult Education  
B.A., University of North Carolina-Chapel Hill  
Graduate Study, Stetson University and Morehead State University

Logan B. Denton . . . . . Teacher Assistant  
B.S., The College of William and Mary  
M.Ed., University of Virginia  
Graduate Study, University of North Carolina-Chapel Hill  
University of North Carolina-Greensboro

Mrs. Geneva Dillard . . . . . Cosmetology  
DeShazor Beauty College  
N. C. State University, North Carolina Central University  
Licensed Instructor, North Carolina Board of Cosmetic Arts

Joseph C. Duncan . . . . . Teacher Assistant  
A.B., Livingstone College  
M.A., Indiana University

Cecil Gooding . . . . . Teacher Assistant  
B.S., East Carolina University  
M.A., East Carolina University

Miss Anne Gravitt . . . . . Adult Education  
B.S., Southern Illinois University

James D. Gray . . . . . Teacher Assistant  
B.S., East Carolina University  
M.Ed., University of North Carolina-Chapel Hill  
Graduate Study, University of North Carolina-Greensboro  
N. C. State University

Dr. G. Richard Gwynn . . . . . Agricultural Science  
and Mechanization  
B.S., N. C. State University  
M.S., N. C. State University  
Ph.D., Iowa State University

Leon F. Hamlin . . . . . Teacher Assistant  
A.B., Catawba College  
M.Ed., Duke University  
Graduate Study, Utah State University

Paul Hammons . . . . . Welding  
Area Redevelopment Authority School, Kanawba County  
(West Virginia) Board of Education  
Certified Instructor, State of West Virginia and United  
States Government

James A. Hastings, Jr. . . . . Business Administration  
B.S., Western Carolina University

Billy O. Hockaday . . . . . Business Administration  
A.B., Atlantic Christian College

- Miss Greta Jeffers . . . . . Teacher Assistant  
B.S., Winston-Salem State University  
M.Ed., N. C. Central University
- T. Earle Johnson, Jr. . . . . Business Administration  
B.S., University of Alabama  
M.B.A., University of Alabama  
Graduate Study, University of North Carolina-Chapel Hill
- Fred Keyser . . . . . Automotive Mechanics  
B.S., Florida Southern University  
Graduate Study, U. S. Naval Post Graduate School,  
Monterey, California
- Smith N. Knight . . . . . Teacher Assistant  
B.S., A & T State University  
M.A., N. C. Central University
- S. Edwin Knott . . . . . Teacher Assistant  
A.A., Campbell College  
B.S., East Carolina University  
M.Ed., East Carolina University
- Mrs. Dorothy N. Lumley . . . . . Cosmetology, Department Head  
Durham Beauty Academy  
Wake Forest University  
Licensed Instructor, N. C. Board of Cosmetic Arts
- Joseph E. Meador, Jr. . . . . Teacher Assistant  
A.B., Elon College  
M.A., University of North Carolina-Greensboro
- Mrs. Diana E. Miller . . . . . Secretarial and Office  
Technologies, Department Head  
B.S., Appalachian State University  
M.A., Appalachian State University
- Mrs. Minnie Ella Montgomery . . . . . Clothing Construction and Design  
Gardner Webb Junior College  
B.S., University of North Carolina-Greensboro
- Mrs. Nina Murphy . . . . . Clothing Construction and Design  
B.S., East Carolina University  
University of Tennessee
- Horace V. Murray . . . . . Agricultural Science  
and Mechanization  
Wake Forest University  
N. C. Apprenticeship, Truck Mechanics  
International Harvester Factory Training Schools,  
Farm Equipment
- Miss Aloha V. Peyton . . . . . Child Care  
B.S., A & T State University

- |   |                         |
|---|-------------------------|
| Charles L. Rectenwald . . . . .                         | Teacher Assistant       |
| A.B., University of North Carolina-Chapel Hill          |                         |
| M.A., University of North Carolina-Greensboro           |                         |
| Ph.D. Candidate, Duke University                        |                         |
| Alan Saunders . . . . .                                 | Business Administration |
| B.S., Virginia Polytechnic Institute                    |                         |
| M.Ed., University of North Carolina-Greensboro          |                         |
| Ed.D. Candidate, Duke University                        |                         |
| Noah G. Simms . . . . .                                 | Electrical Installation |
| . . . . . and Maintenance                               |                         |
| Catawba Valley Technical Institute                      |                         |
| University of West Virginia                             |                         |
| Samuel B. Spencer . . . . .                             | Teacher Assistant       |
| B.S., Winston-Salem State University                    |                         |
| M.A., N. C. Central University                          |                         |
| Mrs. Betty R. Stewart . . . . .                         | Teacher Assistant       |
| A.B., University of North Carolina-Greensboro           |                         |
| M.A.T., Duke University                                 |                         |
| Graduate Study, Columbia University and University      |                         |
| of North Carolina-Chapel Hill                           |                         |
| Hugh E. Talley . . . . .                                | Teacher Assistant       |
| B.S., North Carolina Central University                 |                         |
| M.A., N. C. Central University                          |                         |
| Leon Tew . . . . .                                      | Adult Education         |
| A.B., Elon College                                      |                         |
| Graduate Study, University of North Carolina-Greensboro |                         |
| Morehead State University and N. C. State University    |                         |
| Josiah P. Thomas . . . . .                              | Teacher Assistant       |
| A.B., Shaw University                                   |                         |
| M.Ed., N. C. Central University                         |                         |
| Mrs. Hattie Mae Thompson . . . . .                      | Teacher Assistant       |
| A.B., Elon College                                      |                         |
| Zane G. Thornton . . . . .                              | Teacher Assistant       |
| A.B., University of North Carolina-Chapel Hill          |                         |
| M.Ed., University of North Carolina-Chapel Hill         |                         |
| Glen N. Titus . . . . .                                 | Teacher Assistant       |
| B.E., Eastern Illinois University                       |                         |
| M.A., N. C. State University                            |                         |
| William T. Tuck . . . . .                               | Teacher Assistant       |
| B.S., A & T State University                            |                         |
| M.S., A & T State University                            |                         |



Ezra E. Tysor . . . . . Teacher Assistant

B.S., Fayetteville State Teachers College  
M.A., New York University  
Graduate Study, New York University  
University of North Carolina-Chapel Hill

Cyrus C. Vernon . . . . . Agricultural Science  
 . . . . . and Mechanization

B.S., N. C. State University  
Graduate Study, East Carolina University and  
N. C. State University

Edward M. Vernon . . . . .	Agricultural Science and Mechanization
----------------------------	---

Hempill Diesel School

Mrs. Roxie Wagstaff . . . . . Clothing Construction and Design

B.S., Bennett College

Ralph A. Ward . . . . . Teacher Assistant

B.S., N. C. State University  
M.S., Purdue University

Mrs. Louise W. Winslow . . . . . Teacher Assistant

A.B., East Carolina University

Mrs. Eartha Bridges, R. N. . . . . Practical Nursing

Columbia (S. C.) Hospital School of Nursing  
B.S., North Carolina Central University

Dr. Gene L. Stuessy . . . . . Industrial Management

B.S., Texas A. & M. University  
M.S., Texas A. & M. University  
D. Ed., Texas A. & M. University



## HISTORY

The North Carolina General Assembly, in 1963, authorized a system of comprehensive community colleges and technical institutes to be established in areas of the State where a definite need for such an institution was shown. The Person County Board of Education recognized the need for such an institution and in 1970 appointed a Board of Trustees as the beginning of Person Technical Institute. Thus Person County Technical Institute became the 54th institution currently operating under the North Carolina State Board of Education and the Department of Community Colleges.

The institution began operation on July 1, 1970, with the first full-time students enrolling on September 23, 1970. During a general election in November of 1970, the citizens of Person County approved a referendum authorizing local financial support and gave their endorsement for a Charter to be issued to Person Technical Institute.

In May, 1971, the Trustees approved a name change for the Institute to the present name, Piedmont Technical Institute.

## IMPACT AREA AND LOCATION

Piedmont Technical Institute serves an area of the Northern Piedmont which includes Granville, Person, Caswell Counties in North Carolina, and Pittsylvania, Halifax and Mecklenburg Counties in Virginia. Located in Roxboro, North Carolina, the County Seat of Person County, the Institute is accessible by U. S. Highways 501 and 158, and North Carolina Highways 49, 57, and 157. Piedmont Technical Institute lies 31 miles north of Durham, North Carolina; 36 miles northeast of Burlington, North Carolina; 20 miles east of Yanceyville, North Carolina; 30 miles southeast of Danville, Virginia; 25 miles south of South Boston, Virginia; and 28 miles west of Oxford, North Carolina.

Administrative offices and classrooms are located in a complex at temporary facilities in several locations in Person County. The Administrative offices are located at 313 S. Main Street (next to the Person County Public Library). Classes are held in the Main Classroom Building (204 S. Main Street) and in several other buildings located in various parts of Roxboro and Person County.

## STATEMENT OF PURPOSE

Piedmont Technical Institute, a unit of the North Carolina Community College System, believes in the philosophy of total education. We are dedicated to the development of individual talents, regardless of their nature or degree, to their fullest potential. With the education and realistic work experiences gained at Piedmont Technical Institute, the individual will be better equipped to assume his chosen role in life. As a result of his training, the individual will help relieve the urgent demand for skilled technicians in our present society.

More specifically, our objectives can be stated as follows:

1. To provide expanded educational opportunities for as many individuals as possible who would not otherwise continue their education.
2. To provide relatively inexpensive, nearby educational opportunities for high school graduates, school drop-outs, and adults.
3. To provide technical programs, preparing students for jobs in industry, agriculture, business and service occupations.
4. To provide vocational programs that prepare students for jobs which do not require as much skill as that of the technician.
5. To provide programs of vocational education for employed adults who need training or re-training, or who can otherwise profit from the program.
6. To provide short courses that will meet the general adult and individual needs of the people of the community.

Since all of these objectives cannot be fulfilled by a single program, various programs are presented to the prospective student in order for him to select one which is consistent with his interests and individual aptitudes.

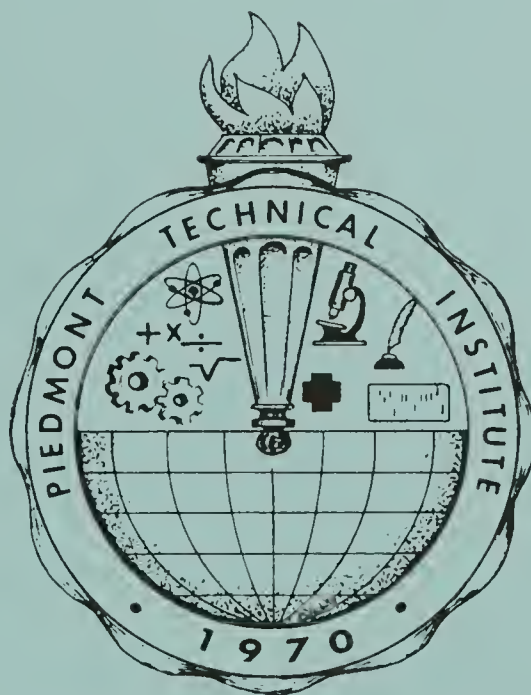
## ACCREDITATION AND PROFESSIONAL STANDING

Piedmont Technical Institute is a member of the North Carolina Department of Community Colleges and offers programs approved by the State Board of Education. In addition, the Institute is a Correspondent with the Southern Association of Colleges and Schools. Courses of study offered at the Institute have been approved for students eligible for assistance through the Veterans Administration, North Carolina Department of Vocational Rehabilitation, North Carolina Department of Social Services, the North Carolina Employment Security Commission, the Manpower Development and Training Agency, and the U. S. Department of Health, Education, and Welfare (Social Security and Federal Financial Aid Programs).

Piedmont Technical Institute holds full institutional membership in the American Association of Junior Colleges, and is a member of the Junior and Community College consortium of schools affiliated with the National Laboratory of Higher Education.



# GENERAL INFORMATION



WHERE YOU CAN ENROLL  
ANY DAY OF THE YEAR

## CATALOG FOR 1972-1974

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## SYSTEMS APPROACH

The most far reaching new concept to come from the field of education is the Systems Approach. The basic assumption is simple. Students achieve mastery of a subject at their own learning rate. The Systems Approach at Piedmont Technical Institute is the "Open Door" to learning. In essence, the student starts at his current level of mastery and progresses through a series of learning steps which are specifically tailored to his educational background. The result is continuous management by the instructor of the individual student's progress. The learning process becomes personalized and heavily concentrated on the "face-to-face" relationship between the student and the instructor. The student is now able to achieve learning objectives well within his learning ability. The instructor, on the other hand, is challenged to identify and resolve individual barriers to learning. In this "give and take" process, the student and the instructor become a team working together without fear of failure - the first barrier to learning. As a student increases his own ability to recognize problem areas and search for solutions from sources outside of his instructor, he develops independent learning and thinking habits and becomes less reliant on his instructor. The point at which the student attains almost complete independence is graduation day, for he has learned to solve problems in his chosen profession without continuous supervision.

## ADMISSION PROCEDURE AND ENTRANCE REQUIREMENTS

### GENERAL ADMISSION REQUIREMENTS TO CAREER EDUCATIONAL PROGRAMS

In keeping with its established "Open Door" policy, Piedmont Technical Institute does not impose restrictive standards for admission. All students 18 years of age or older, who can benefit from instruction will be admitted, registered and enrolled any day of the year school is in session.

Although practically all applicants will be admitted to the institution, the student will be required to meet selected minimum requirements before admission to a specific curriculum can be granted. Any deficiencies can be completed through courses available at Piedmont Technical Institute. This permits the retention of quality in each curriculum and is also beneficial for the applicant by providing a program in which he is capable of reaching success.

The Associate Degree Career Programs (Technical Programs) require High School graduation or its equivalency for admission. If an applicant has not graduated from High School, or otherwise fulfilled this requirement, he can do so by successfully completing all parts of the General Education Development Test (GED), or completing the Adult High School Program, both available through the Learning Laboratory or Community Resource Centers at Piedmont Technical Institute.

The Diploma Career Programs are open to any student who can benefit from the instruction. A High School diploma or its equivalency is recommended, but not required.

A student is officially admitted to a curriculum when all admission requirements are met and the student receives notification from the Student Personnel Office.



## SPECIFIC ADMISSION REQUIREMENTS

All applicants for admission to a curriculum program are to complete the following steps:

1. Furnish a completed application for admission with a \$10 deposit. The deposit is non-refundable, but will be applied to tuition the first quarter the applicant is enrolled (if within one year).
2. Have records of all previous education mailed to the Institute. Applicants who have the high school equivalency certificate should submit a copy of the certificate, and should also ask their high school to send transcripts of any grades earned at the school. All transcripts must come directly from the school to the Institute.
3. Schedule an interview with the Student Personnel Office.

## ADMISSION OF OUT-OF-STATE STUDENTS

Out-of-state students are admitted under the same regulations as North Carolina residents. Tuition and other specific details that apply to out-of-state students are available on request from the Student Personnel Services Office.

## ADMISSION OF TRANSFER STUDENTS

Piedmont Technical Institute will accept credits from all institutions within the North Carolina Community College System as well as from other accredited colleges, technical institutes, and business and vocational schools. Credits earned at other institutions with a grade of "C" or better, or the average grade of that institution, will be accepted for transfer. The content of the courses being transferred must parallel the content of similar courses offered by Piedmont Technical Institute.

## ADVANCED PLACEMENT

The Institute offers a program of advanced placement and/or standing with credit based upon prior education or excellence. Any student may apply for this privilege through the Student Personnel office, his advisor, or through an instructor.

The Committee for Advanced Placement will determine the credit to be allowed, if any. Such allowances may be based upon the results of oral, written and/or manipulative tests, credits for prior education, and/or experience.

FEES AND EXPENSES

General Fees

A major objective of Piedmont Technical Institute is to provide quality education at the lowest possible cost for the student. Tuition and fees paid by the students are kept at a minimum and do not represent the total operating expenses of the Institute. The balance is provided by local, state, and federal revenues.

Fees are payable at the time of registration and included all charges applicable to the quarter. Students enrolling during a quarter will be charged a prorated tuition based on the following formula:

$$\text{(Credit Hours)} \times \frac{\text{(Weeks remaining in Qtr.)}}{11} \times \$ 2.50 = \text{Tuition Fee}$$

Schedule of Fees

TUITION PER QUARTER	(11 weeks)
FULL-TIME STUDENT	\$32.00
PART-TIME STUDENT	\$2.50 per credit hour
STUDENT ACTIVITY FEE	
(per quarter)	\$2.50
GRADUATION FEE (includes diploma and rental of cap and gown)	\$10.50

For tuition purposes, a full-time student is one who is enrolled for 13 credit hours or more. The credit hours for each course are listed elsewhere in this catalog and are based on the following criteria:

1 CLASS HOUR	=	1 cr. hr.
2 LAB. HOURS	=	1 cr. hr.
3 SHOP HOURS	=	1 cr. hr.

Textbooks and Supplies

The cost of textbooks and supplies will vary according to the program of study. Average cost will vary from \$20 to \$30 per quarter for full-time students. The Institute operates a book-store where these purchases may be made.

## REFUND POLICY

Tuition refund for students shall not be made unless the student is, in the judgment of the institution, compelled to withdraw for unavoidable reasons. In such cases, two-thirds ( $2/3$ ) of the student's tuition may be refunded if the student withdraws within ten (10) calendar days after the first day of classes as published in the institute's calendar. Tuition refunds will not be considered for amounts of five dollars (\$5.00) or less. The exception being when a course or curriculum fails to materialize, the student's tuition shall be refunded. No refund can be made of the \$10 tuition deposit unless the applicant is refused admission to the program for which he applied, or the program is terminated by the institute.

## REFUNDS FOR VETERANS

Veterans or war orphans receiving benefits under U. S. Code, Title 38, Chapters 33 and 35, may be refunded the pro rata portion of the tuition fee not used at the time of withdrawal. There will be no refund of special fees such as those charged for Student Activities.

## FULFILLMENT OF FINANCIAL OBLIGATIONS

No degree, diploma, certificate, or course credit will be granted, nor will a transcript be provided for a student until all financial obligation to the institute, other than student loans, have been paid.

All previously incurred expenses and accounts, including library fines, must be fully paid before a student may re-enter at the beginning of any quarter.



## ACADEMIC REGULATIONS

### DEGREES, DIPLOMAS, AND CERTIFICATES

The Associate of Applied Science Degree (A.A.Sc.) and the Associate in Arts Degree (A.A.) are awarded to graduates in the General Education and Technical Programs. These degrees are conferred in the name of the North Carolina State Board of Education.

A State Diploma issued in the name of the North Carolina State Board of Education is awarded candidates who successfully complete a vocational program of study.

Certificates are issued in the name of Piedmont Technical Institute to students who successfully complete any short-term program of study.

A high school diploma is awarded jointly by Piedmont Technical Institute and the Person County Board of Education to adults who complete the high school program at Piedmont Technical Institute.

The unit of credit at Piedmont Technical Institute is the quarter hour. The school year consist of four quarters each containing fifty-five class days. For the credit hours of a given course, consult the course description in this catalog.

### REGISTRATION

Registration is available any weekday when school is in session. Dates listed in the calendar in this catalog represent the days when tuition will be collected and data cards completed. Also, these dates represent the beginning of each academic reporting period.

Changes in schedules must be approved by the student's faculty advisor and arranged through the office of Student Personnel Services.

Registration for non-credit classes is usually held at or before the first class meeting of the course.

## SPECIAL STUDENTS

Students may enroll for up to 18 credit hours of individual curriculum classes without meeting full admission requirements and be classified as special students. Credits earned by such students may be applied to a degree or diploma. At that point, all requirements for admission must be met if the student plans to continue working toward a degree or diploma.

A student who audits a course pays regular registration and tuition fees. Auditors do not take tests or examinations, nor do they receive grades or credit. In addition, they cannot later change the "audit" to credit.

## GRADING SYSTEM

Under the Systems Approach, a Student's academic progress is reported as follows:

- H — Honors: Student did substantial work beyond required objectives.
- P — Passing: Student has successfully mastered all objectives of the course.
- I — Incomplete: Student has not completed all objectives of the course.
- W — Student has withdrawn.
- AUDIT — No credit, Student enrolled for experience only.

## STUDENT RECORDS

All progress is recorded in the student's official transcript at the completion of each quarter. The student will be furnished with a report quarterly.

Once recorded, the student's award may be changed only with the written authorization of the instructor and approval of Educational Development Officer.

## WITHDRAWALS

The official withdrawal from any or all classes must be arranged through the student's advisor and the office of Student Personnel Services. Failure to officially withdraw will be shown on the student's record and may result in loss of credits.

## GRADUATION REQUIREMENTS

The student will be held responsible for fulfilling all requirements for the degree or diploma which he expects to receive. To meet these requirements, the student should:

1. Apply to the office of Student Personnel Services for his degree or diploma at the beginning of the last quarter prior to his completing all program requirements.
2. Have his advisor certify that minimum requirements in credit hours and required courses for his particular course of study have been met. These requirements have been established by the institution and are listed under "Programs of Study" in this catalog.
3. Meet all financial obligations to the institution, including the \$10.50 graduation fee.
4. Special cases involving transfer credit from other institutions will be reviewed individually as necessary.
5. All candidates for graduation are required to participate in graduation exercises to receive the degree or diploma unless excused by the Student Personnel Office.



## FINANCIAL AID

### General Information

Students in need of financial aid should apply for assistance from scholarship funds, loan funds, grants, and the federal work-study program. Additional funds are available for veterans, children or widows of deceased veterans, and disabled or handicapped persons. Application for financial assistance should be filed with the office of Student Personnel Services.

### Scholarships and Loans

Limited scholarship funds may be available for students in need of financial assistance in addition, low interest student loans are available through the College Foundation, Inc. Interested students who indicate financial need may borrow up to \$1,000 yearly. The interest rate varies depending upon the actual source of monies borrowed. Information concerning these scholarships is available in the office of Student Personnel Services.

### Work-Study Program

A limited number of students may be employed on a part-time basis through the institute under the provisions of the federal work-study program. Applicants for work-study must show that earnings are needed to commence or continue training at the institute on a full-time basis. Information is available from the Student Personnel Office.

### Educational Opportunity Grants

Educational Opportunity Grants are awarded to students from families of modest income, with particular attention given to those families whose incomes allow little or no financial assistance to the students for college expenses. These funds are administered by the institute. Students should make application to the Student Personnel Office.



## Vocational Rehabilitation

The North Carolina Department of Vocational Rehabilitation offers services to enable an employment-handicapped person to become self-supporting. Eligible handicapped persons may receive financial assistance through Vocational Rehabilitation while enrolled at Piedmont Technical Institute, and are urged to contact their V. R. Area Representative, or the Student Personnel Office.

## Veterans, War Orphans, Widows and Wives, Educational Assistance

All programs offered by Piedmont Technical Institute are approved for training under the provisions of Public Laws 894, 87-815, 89-358 for Veterans, and Public Law 634 for War Orphans. Children of totally disabled Veterans are also eligible for assistance under Public Law 88-361.

Persons eligible for benefits under the provisions of these programs should contact their local Veterans Service Office for application and information, or contact the Student Personnel Office.

## Manpower Development and Training Individual Referrals

The North Carolina Employment Security Commission may recommend prospective students for financial assistance through MDTA. The local Employment Security Commission office in your area is responsible for handling all applications and should be contacted for assistance or information.

## Survivors' Educational Benefits Under Social Security

Certain Dependent survivors of deceased persons insured under Social Security may qualify for educational benefits. These students should apply through the Student Personnel Office.

## ATTENDANCE

Regularity of class attendance is necessary in order to receive maximum benefits from the program offered and for maintenance of a satisfactory academic record. Whenever a student's attendance or punctuality record endangers his own success or that of other students, he may be dropped from the course. Absences will be considered justifiable and excusable only in cases of emergencies, illness, or death in the immediate family.

A student is expected to confer with each instructor before anticipated or after unavoidable absences. The instructor will determine if the excuse is justifiable. The decision as to whether an absence is excused or unexcused rests entirely with the instructor.

## STUDENT CONDUCT

A student enrolled at Piedmont Technical Institute may rightfully expect that the teachers and administrators will maintain an environment in which there is freedom to learn. This requires that there be appropriate conditions and opportunities in the classroom and on the campus.

A student at Piedmont Technical Institute assumes an obligation to conduct himself in a manner compatible with the institute's function as an educational institution. It is expected that the student will adhere to the rules and regulations as may be established, and that the student will respect the rights, privileges, and property of other members of the institutional community. A student is responsible for his own conduct and violation of rules and regulations as may be established for the student body or a department may subject him to disciplinary measures or dismissal.

## TRAFFIC REGULATIONS

Parking facilities are available in the downtown area of Roxboro and at all outlying locations. Any violations of local parking or traffic regulations will be the responsibility of the student. Any student having difficulty in locating a suitable parking space is asked to bring this problem to the attention of the Student Personnel Office.

## OTHER STUDENT SERVICES

### Guidance and Counseling

A counseling service is available for the Student Personnel Office for students who need assistance with vocational, educational, or personal problems. An interview with any counselor is conducted in strict confidence.

In addition, each student is assigned a faculty advisor who will assist in planning class schedules, in registration, and in other problems which might arise. Students are urged to consult their advisors and counselors when problems develop.

### Placement Services

Although Piedmont Technical Institute does not guarantee placement upon graduation, it is the Institute's goal to help students all find suitable employment. Records of interested employers will be maintained, and interviews with prospective employers will be arranged. There is no charge to industry or students for this service.

### Housing

The Institute does not provide housing, but a file of private housing is available through the Student Personnel Office, and assistance in locating suitable living quarters for students will be provided.



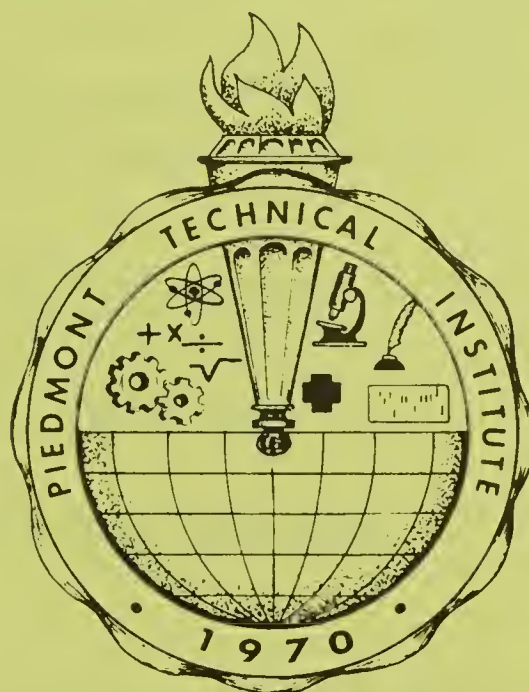
## Testing

Included in the counseling program are individual and small group tests which may be given on student request, and/or on the recommendation of a staff member. The testing program does not determine the student's qualifications for admission, since all applicants are eligible for admission. The information obtained is strictly an aid for use in counseling and placement.



# GENERAL EDUCATION PROGRAM

**TENTATIVE**



THE STUDENT CENTERED  
INSTITUTION

## CATALOG FOR 1972-1974

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## GENERAL EDUCATION CURRICULA

### COLLEGE TRANSFER OPTION

#### Tentative Programs of Study Leading to Associate in Arts Degree

The pre-professional curricula to be offered by Piedmont Technical Institute are listed on the following pages. These programs, pending approval, will parallel in content those offered by most four-year institutions. Requirements to professional programs vary among schools, colleges, and universities. The following programs suggest certain courses for students planning to transfer. It is imperative that the student make an early decision on the institution to which he wishes to transfer and then elect the courses which will allow him to meet the requirements of that institution.

Counselors and faculty advisors may suggest certain changes from the following guides when it is evident that a particular course or sequence of courses is not appropriate for the four-year college or university to which the student expects to transfer.

#### GENERAL EDUCATION REQUIREMENTS FOR THE

##### ASSOCIATE IN ARTS OR

##### ASSOCIATE IN SCIENCE DEGREE

Associate in Arts candidates must complete the following General Education courses (or the equivalent) in addition to approved electives for a minimum of 96 credit hours:

	Quarter Hours Credit
Communications Arts (ENG 101, 102, 103, and Speech 101)	12
Humanities A. Literature or Foreign Language (9 hours) B. Music, Art or Philosophy (6 hours)	15
Mathematics	5 to 10
Natural Science (Biology, Physical Science, Physics, Chemistry) (It is recommended that 3 quarters of one Science be selected)	12
Social Science History 101, 102, 103 Six hours from the following: Economics, Geography, Political Science, Sociology or Psychology	15
Guidance	1
Physical Education*	6
Electives	25 - 30

\*Students who are physically disabled may receive an exemption from the Physical Education Department, but must enroll for PED 180, Personal and Community Health.



## GENERAL EDUCATION CURRICULUM

(A program designed for those students who do not have a definite educational objective, but who wish to take a program of studies which will allow flexibility in transferring or which will be of value to the general cultural development of the students.)

### SPECIFIC SUBJECT AREAS :

PRE-BUSINESS ADMINISTRATION

PRE-BUSINESS EDUCATION

PRE-ENGINEERING

PRE-SCIENCE

PRE-TEACHING

PRE-RECREATIONAL

LIBERAL ARTS

### SELECTION OF INDIVIDUAL COURSES

Since college and University course requirements vary, each student will work with his or her advisor in selecting an appropriate schedule and sequence of courses. It is most important that the student select their senior institution to which he plans to transfer early in his program so a plan can be made to insure that entry requirements are met.

## ART

	Hours Per Week		Quarter Credit Hours
	Class	Lab	
ART 101 Art Appreciation	3	0	3
A study of the principles and elements of art; the interrelationship of the arts and their relation to the development of the individual and of cultures. Field trips to museums, dramatic productions, dance recitals, and concerts will be planned whenever possible.			
Prerequisite: None.			
ART 102 Art History	3	0	3
An historical examination of art forms and art media, developed to equip the student for intelligent discrimination in art.			
Prerequisite: ART 101.			
ART 121 Color and Design I	1	5	3
The study of color and the exploration of color through practical application to beginning design problems, both two-dimensional and three-dimensional.			
Prerequisite: None.			
ART 122 Color and Design II	1	5	3
The application of color and design theories to two-dimensional surfaces. Textile and gift wrap papers and wall-paper design are bases for the practical application of these problems.			
Prerequisite: ART 121.			
ART 123 Color and Design III	1	5	3
Advanced work in both two-dimensional and three-dimensional design with application to forms related to the crafts of pottery, mosaics, creative stitchery, jewelry, etc.			
Prerequisites: ART 121, ART 122.			
ART 131 Drawing and Composition I	1	3	2
Beginning drawing and the study of the problems of composing a picture. A wide variety of techniques including pencil, charcoal, conti, pen and ink, brush and ink, will be used. Figure drawing, stilllife, and nature will be the subjects.			
Prerequisite: None.			
ART 132 Drawing and Composition II (Printmaking)	1	3	2
Using the knowledge gained in ART 131, the techniques of printing will be explored. Wood-cut, lino-cut, serigraph, monoprint, etc.			
Prerequisite: ART 131.			
ART 133 Drawing and Composition III (Perspective)	1	3	2
Advanced drawing and composition. Perspective study and continued work with figure drawing. Problems in book illustration will provide subject matter for study.			
Prerequisites: ART 131, ART 132.			
ART 141 Oil Painting I			3
Introduction to the technique of oil painting; includes the study of pictorial composition, color, and the elements and principles of art which assist the student in the development of a painting.			
Prerequisite: None.			

- |  |   |   |   |
|--|---|---|---|
| ART 142 Oil Painting II  | 1 | 3 | 3 |
| Advanced study of the techniques involved in oil painting and an introduction to figure and portrait painting.   |   |   |   |
| Prerequisite: ART 141.   |   |   |   |
| ART 143 Oil Painting III   | 1 | 3 | 3 |
| Portrait painting in oils.   |   |   |   |
| Prerequisites: ART 141, ART 142.   |   |   |   |
| ART 151 Watercolor and Mixed Media   | 1 | 3 | 2 |
| A creative approach to techniques and materials. College, montage, and mosaics will provide the problems for mixed media. Traditional techniques of watercolor painting will be a part of this course. |   |   |   |
| Prerequisite: None.  |   |   |   |
| ART 161 Beginning Sculpture  | 1 | 3 | 2 |
| Study of form in clay. Clay and other media will be used. Portraiture in clay will be a part of the course experience.   |   |   |   |
| Prerequisite: None.  |   |   |   |
| ART 171 Ceramic Design I   | 1 | 5 | 3 |
| Introduction to pottery making techniques including coil, slab, patch, pinch, and wheel thrown. Introduction to elementary experiments with clays and glazes, their composition and uses.              |   |   |   |
| Prerequisite: None.  |   |   |   |
| ART 172 Ceramic Design II  | 1 | 5 | 3 |
| Wheelthrowing techniques will be stressed. Study and experiments with North Carolina raw materials used in ceramic wares and experiments to develop new usable compositions.                           |   |   |   |
| Prerequisite: Art 171.   |   |   |   |
| ART 173 Ceramic Design III   | 1 | 5 | 3 |
| Advanced throwing. Advanced clay and glaze experiments and firing processes.   |   |   |   |
| Prerequisite: ART 172.   |   |   |   |
| ART 174 Ceramic Design IV  | 1 | 5 | 3 |
| Glaze and body research. Wheel, moxaic and sculpture problems.   |   |   |   |
| Prerequisite: ART 173.   |   |   |   |
| ART 175 Ceramic Design V   | 1 | 5 | 3 |
| Advanced design and materials research. Wheel work and sculptural techniques. Glaze and clay body research of original nature.   |   |   |   |
| Prerequisite: ART 174.   |   |   |   |
| ART 176 Ceramic Design VI  | 1 | 5 | 3 |
| Advanced design culminating in 12 pieces of original pottery and ceramic sculpture suitable for exhibit.   |   |   |   |
| Prerequisite: ART 175.   |   |   |   |

## BUSINESS AND ECONOMICS

- |   |   |   |   |
|---|---|---|---|
| BUS 101 Introduction to Business<br>(BUS 141)   | 5 | 0 | 5 |
| A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization, and management. |   |   |   |
| Prerequisite: None.   |   |   |   |



- |  |   |   |   |
|--|---|---|---|
| BUS 102 Typewriting I<br>(BUS 101)   | 1 | 4 | 3 |
| Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts.<br>Prerequisite: None.   |   |   |   |
| BUS 103 Typewriting II<br>(BUS 102)  | 1 | 4 | 3 |
| Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques applied in tabulation, manuscript, correspondence, and business forms.<br>Prerequisite: BUS 102 or the equivalent. Speed requirement, 30 words per minute for five minutes.   |   |   |   |
| BUS 104 Typewriting III<br>(BUS 103)   | 1 | 4 | 3 |
| Emphasis on production typing problems and speed building. Attention to the development of the student's ability to function as an expert typist, producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms.<br>Prerequisite: BUS 103 or the equivalent. Speed requirement, 40 words per minute for five minutes. |   |   |   |
| BUS 106 Shorthand I<br>(BUS 111)   | 1 | 4 | 3 |
| A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms, and phrases.<br>Prerequisite: None.   |   |   |   |
| BUS 107 Shorthand II<br>(BUS 112)  | 1 | 4 | 3 |
| Continued study of theory with greater emphasis on dictation and elementary transcription.<br>Prerequisite: BUS 106 or the equivalent.   |   |   |   |
| BUS 108 Shorthand III<br>(BUS 113)   | 1 | 4 | 3 |
| Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription.<br>Prerequisite: BUS 107.  |   |   |   |
| BUS 110 Office Machines<br>(BUS 161)   | 2 | 2 | 3 |
| A general survey of business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator.<br>Prerequisite: None.   |   |   |   |
| BUS 120 Accounting I<br>(ACC 101)  | 5 | 2 | 6 |
| Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned.<br>Prerequisite: Freshman Math.  |   |   |   |



BUS 121 Accounting II 5 2 6

Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on the recording, summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems.

Prerequisite: BUS 120.

ECO 201 Economics I 5 0 5

A general course designed to give an understanding of the organization of economic life. Includes a study of the principles and problems involved in the production, distribution and utilization of the national income, and a consideration of relationships between government and business.

Prerequisite: None.

ECO 202 Economics II 5 0 5

A continuation of ECO 201. Greater depth in principles of economics, including the composition and pricing of national output, the distribution of income, international trade and finance, and current economic problems.

Prerequisite: ECO 201.

ENGINEERING

EGR 101 Engineering Graphics I 2 3 3  
(DFT 101)

Study of the graphical methods and techniques used to express, interpret and communicate engineering ideas. Attainment of basic skills and techniques of drafting; use of drafting equipment; lettering; freehand orthographic and pictorial sketching; geometrical construction; orthographic instrument drawing of principle views.

Prerequisite: None.

EGR 102 Engineering Graphics II 2 3 3  
(DFT 102)

Studies in solving special problems graphically, with emphasis on visualization of the relationship of objects in space through graphical analysis. Standards and practices of dimensioning; the mechanical drawing of complex views. Methods of reproducing, filing, and storing drawings.

Prerequisite: EGR 101.

ENGLISH, DRAMA, AND SPEECH

\*ENG 101 English Composition I 5 0 5

Review of parts of speech, sentence structure, paragraph structure and development, outlining, and exposition. Outside reading and writing assignments. Writing assignments in part are based on outside reading of modern essays and short stories.

Prerequisite: Satisfactory score on placement tests.

\*ENG 102 English Composition II 5 0 5

Continuation course. Extensive work in theme writing based on outside reading and class discussion of selected short stories, poems, and plays. One major research paper is required.

Prerequisite: ENG 101.

ENG 110 English Composition I 3 0 3

Study of grammar and composition. Review of parts of speech, sentence structure, paragraph structure and development, vocabulary, note taking, outlining, exposition. Outside reading and writing assignments.

Prerequisite: Satisfactory score on English placement test.

- ENG 111 English Composition II 3 0 3  
A continuation of English 110. Introduction to the short story. Increased emphasis on the writing process.  
Prerequisite: ENG 110 or approved advanced placement.
- ENG 112 English Composition III 3 0 3  
A continuation of English 111. Consideration of short stories, plays, and poetry as models of literary style. Writing in depth.  
Prerequisite: ENG 111.
- ENG 201 British Literature I 5 0 5  
A survey of British literature from the earliest period through the 18th Century, with emphasis on major writers: Chaucer, Shakespeare, Milton, Dryden, and Johnson.  
Prerequisite: ENG 112 or permission of the Dean.
- ENG 202 British Literature II 5 0 5  
A survey of British literature from the Romantic Period to the present, with emphasis on major writers: Wordsworth, Keats, Tennyson, Browning, Shaw, Eliot.  
Prerequisite: ENG 112 or permission of the Dean.
- ENG 203 American Literature I 5 0 5  
A study of the development of American literature through representative writers from the Colonial Period to the late 19th Century. Emphasis given to the following writers: Bradford, Taylor, Franklin, Poe, Emerson, Thoreau, Hawthorne, Whitman.  
Prerequisite: ENG 112 or permission of the Dean.
- ENG 204 American Literature II 5 0 5  
A study of American literature from late 19th Century to the present, with emphasis on the following writers: Mark Twain, Dreiser, O'Neill, Frost, Hemingway, Faulkner.  
Prerequisite: ENG 112 or permission of the Dean.
- ENG 220 Creative Writing 3 0 3  
Instruction and practice in the writing of short stories, short plays, poetry, and creative essays. The immediate outcome of this course is an annual publication of student written compositions.  
Prerequisite: ENG 112.
- DRA 210 Introduction to The Theatre, I 3 0 3  
Introduction to the theatre through the study of theatre history, types of drama, and play construction. Individual projects in writing, acting, directing, and design.  
Prerequisite: None.
- DRA 211 Introduction to The Theatre II 3 0 3  
Emphasis on play production: acting, directing, staging methods.  
Prerequisite: DRA 210 or permission of instructor.
- SPH 101 Principles of Speech 5 0 5  
A functional approach to the problem of effective speaking. The organization, composition, and delivery of speeches, with particular emphasis on application in actual speech situations.  
Prerequisite: None.





## FOREIGN LANGUAGES

FRE 101 Elementary French I	5	2	5
An introduction to French, with a modern audio-lingual approach. Up-to-date materials and methods. Emphasis first on hearing and speaking, then on reading and writing. Lab work required as a part of the course. For those with no previous French or those who do not make a satisfactory score on the French placement test. Prerequisite: Satisfactory score on college placement tests.			
FRE 102 Elementary French II	5	2	5
A continuation of FRE 101. Prerequisite: FRE 101.			
FRE 151 Intermediate French I	5	2	5
A review of the skills of hearing, speaking, reading, and writing. Audio-lingual work in class and in lab. Selected supplementary readings. Prerequisites: Two units of high school French and a satisfactory placement test score of FRE 101 and FRE 102.			
FRE 152 Intermediate French II	5	2	5
A continuation of French 151. Prerequisite: FRE 151.			
FRE 201 Survey of French Civilization I	5	0	5
The first of a two-course sequence. A study of French culture and civilization. Selected readings in French literature from the Middle Ages to the present. Parallel reading and reports. Prerequisite: FRE 152.			
FRE 202 Survey of French Civilization II	5	0	5
A continuation of French 201. Prerequisite: FRE 201.			
SPA 101 Elementary Spanish I	5	2	5
An introduction to Spanish, with a modern, audio-lingual approach. Up-to-date materials and methods. Emphasis first on hearing and speaking, then on reading and writing. Lab work required as part of the course. For those with no previous Spanish or those who do not make satisfactory score on Spanish placement tests. Prerequisite: Satisfactory score on college placements tests.			
SPA 102 Elementary Spanish II	5	2	5
A continuation of Spanish 101. Prerequisite: SA 101.			
SPA 151 Intermediate Spanish I	5	2	5
A review of the skills of hearing, speaking, reading, and writing. Audio-lingual work in class and in lab. Selected supplementary readings. Prerequisites: Two units of high school Spanish and a satisfactory placement test score, or SPA 101 and SPA 102.			
SPA 152 Intermediate Spanish II	5	2	5
A continuation of Spanish 151. Prerequisite: SPA 151.			
SPA 201 Survey of Spanish Civilization I	5	0	5
The first of a two-course sequence. A study of Spanish culture and civilization. Selected readings in the literature of Spain and Spanish American from the Middle Ages to the present. Parallel reading and reports. Prerequisite: SPA 152.			



SPA 202 Survey of Spanish Civilization II                    5            0            5  
A continuation of Spanish 201.  
Prerequisite: SPA 201.

MATHEMATICS

\*MATH 101 Basic Concepts of Mathematics I            5            0            5  
Designed for liberal arts students for transfer. This course gives a modern approach into the nature of mathematics, basic concepts of logic, number systems, sets, equations, inequalities, functions and relations.  
Prerequisite: Satisfactory score on placement tests.

\*MATH 102 Basic Concepts of Mathematics II            5            0            5  
A study of the rational numbers, irrational numbers, complex numbers, equations, inequalities, functions, permutations, selections, probability measurement, trigonometry and mensuration.  
Prerequisite: MATH 101.

MAT 101 Business Mathematics                                    5            0            5  
(T-BUS 145) (T-MATH 110)  
A course stressing the fundamental operations and their application to business problems, Topics covered: payrolls, price marking, interest, and discount, commission, taxes, and pertinent use of mathematics in the field of business.  
Prerequisite: None.

MAT 105 Basic Concepts of Mathematics I            3            0            3  
A study of sets, relations, mappings, elementary logic, truth tables, nonmetric geometry, Euclidean geometry, and coordinate geometry. Primarily designed for liberal arts and education students.  
Prerequisite: Satisfactory score on math placement test.

MAT 106 Basic Concepts of Mathematics II            3            0            3  
A study of numeration, scales of rotation, and the complete number system: natural numbers, integers, rational, irrational, imaginary and complex numbers.  
Prerequisite: MAT 105 or approved advanced placement.

MAT 107 Basic Concepts of Mathematics III            3            0            3  
A study of equations, inequalities, functions, permutations, selections, probability, measurement, mensuration, and an introduction to trigonometry.  
Prerequisite: MAT 106.

MAT 110 College Algebra    5            0            5  
Designed for pre-math, pre-science, or pre-engineering majors. Stresses those topics which are essential for college algebra; algebra of numbers, elementary set theory, function concept, linear and quadratic functions, inequalities, mathematical induction, binomial theorem, complex numbers, permutations and combinations, probability, systems of equations and matrices.  
Prerequisite: Satisfactory score on math placement test.

MAT 120 College Trigonometry                                    5            0            5  
(MAT 111)  
Develops the analytical approach in studying the trigonometric functions using rectangular and polar coordinates, periodicity and basic graphs, trigonometric identities and equations, multiple angle formulas, inverses of trigonometric functions, solutions of triangles, and complex numbers.  
Prerequisite: MAT 110 or approved advanced placement.

MAT 150 Analytical Geometry and  
Calculus I

5 0 5

Includes an introduction to analytic geometry, functions, limits, derivatives, and their applications, and an introduction to integration.

Prerequisite: MAT 120.

MAT 201 Analytical Geometry and  
Calculus II

5 0 5

A course covering integration, the definite integral, exponential and logarithm function, trigonometric and inverse trigonometric functions, formal integration and applications with conic sections.

Prerequisite: MAT 150.

MAT 202 Analytical Geometry and  
Calculus III

5 0 5

Includes continuous and differentiable functions, infinite series, plane curves, vectors, polar coordinates, and three-dimensional analytic geometry.

Prerequisite: MAT 201.

MAT 203 Analytica

MAT 203 Analytical Geometry and  
Calculus IV

5 0 5

Differential calculus of functions of several variables, multiple integration, line and surface integral, and differential equations.

Prerequisite: MAT 202.

MAT 220 Differential Equations

5 0 5

A study of the solution of ordinary differential equations; first order equations, linear equations of any order, series solutions, and applications.

Prerequisite: MAT 203.

## MUSIC

MUS 101 Music Appreciation  
(MUS 110)

5 1 5

A study of the basic fundamentals of music with a survey of forms, styles, and composers, giving reference to cultural background and the integration of music with the other arts. This course does not presuppose a technical knowledge of music and is designed to enhance a student's understanding, thereby helping him to become a more intelligent listener.

Prerequisite: None.

## PHYSICAL EDUCATION

PED 101 or PED 201 (Hlth 101)

Individual Physical Education Activity

0 2 1

Activity in and study of the rules, strategy, history and terminology in the following activities: Archery, bowling, golf, gymnastics, horseback riding, tennis, track and field and weightlifting.

Prerequisite: None.

PED 102 or PED 202

Team Physical Education Activity

0 2 1

Activity in and study of the rules, strategy, history, and terminology of the following activities: Flag football, soccer, softball and volleyball.

Prerequisite: None.



PED 150 Personal and Community Hygiene 5 0 5

Designed to present basic and community health knowledge and to develop proper health habits and attitudes in the individual and the community. A general survey of personal and community health habits and conditions, including adjustments of the college freshman.

Prerequisite: None.

PED 220 Principles of Health and Physical Education 5 0 5

Designed for students who expect to teach or coach. Includes the history of health education and physical education; philosophical, psychological, physiological, and sociological background for the teaching of health and physical education; basis for programs, and organization of activities.

Prerequisite: PED 150.

## PHILOSOPHY AND RELIGION

PHI 101 Introduction to Philosophy 5 0 5

A survey of the major issues of philosophy. An examination of typical problems, such as moral freedom, the mind-body relationship, and the meaning of truth. A description of the schools of naturalism, idealism, realism, and pragmatism.

Prerequisite: None.

PHI 201 Introduction to Logic 5 0 5

A survey of the general principles of deductive and inductive logic and the characteristics of empirical knowledge. Emphasis on the establishment of reflective habits.

Prerequisite: None.

REL 101 Religions of the World 5 0 5

The great religions of mankind as related to the history of China, India, and the Near East. The study of this background and the reading of the great classics of these religions.

Prerequisite: None.

REL 105 The Religious Background of Western Civilization 5 0 5

A historical study of the impact of the faith of the Old Testament, Graeco-Roman religion, Teutonic religion, and Christianity upon the life and thought of the Western world.

Prerequisite: None.

REL 106 Religious Thought in the Twentieth Century 5 0 5

A study of recent trends in religious thought as exhibited in thinkers like Niebuhr, Maritain, Buber, Tillich, and Temple.

Prerequisite: None.

REL 151 Introduction to Old Testament Literature 5 0 5

The historical background of the books of the Bible, to enable students to read the Old Testament with fuller appreciation of its messages about man and God.

Prerequisite: None.

REL 161 Introduction to New Testament Literature 5 0 5

The life, teachings, and significance of Jesus Christ and Saint Paul; emphasizes especially the study and comparison of the first three gospels.

Prerequisite: None.





## SCIENCE - BIOLOGY

- \*BIO 101 Principles of Biology 4 2 5  
A course designed to present the fundamental principles of biology organized around the concepts of metabolism, growth, reproduction, responsiveness, and adaptation.
- \*BIO 102 General Zoology 3 4 5  
A survey of the animal kingdom, from single to complex, with study of basic structures and life processes of representative animals.  
Prerequisite: Principles of Biology—five quarter hours—three lectures and two labs weekly.
- \*BOT 103 General Botany 3 4 5  
A survey of the plant kingdom, with study of basic structures and functions, and principles of plant classification.  
Prerequisite: Principles of Biology—five quarter hours—three lectures and two labs weekly.
- BIO 110 General Biology I 3 3 4  
This course is designed to familiarize the individual student with the basic principles of life. Emphasis is placed upon matter and energy, cell content, cell physiology and cellular reproduction, genetics, evolution and ecology.  
Prerequisite: None.
- BIO 111 General Biology II 3 3 4  
This course will acquaint the student with the plant and animal kingdoms. An application of the principles acquired in BIO 110 will be utilized to give the student an appreciation of nature, the plants and animals and their relationships.  
Prerequisite: BIO 110.
- BIO 112 General Biology III 3 3 4  
Continuation of Biology 111.  
Prerequisite: BIO 111.
- BIO 201 Botany 2 4 4  
A survey of the plant divisions with emphasis on life histories, taxonomy, reproduction and discussion of the biologically important plant groups.  
Prerequisites: BIO 110, 111, 112.
- BIO 205 Invertebrate Zoology 2 4 4  
A survey of the invertebrates stressing life histories, morphology, anatomy, ecological distribution and importance. Several major dissections of the various phyla will be included as a part of the laboratory work.  
Prerequisites: BIO 110, 111, 112.
- BIO 206 Vertebrate Zoology 2 4 4  
The study of chordates from the embryo to the adult. Emphasis will be placed on structure and function of the major body systems of many chordates. Genetics will be introduced in both the lecture and laboratory.  
Prerequisites: BIO 110, 111, 112.
- BIO 210 Human Anatomy and Physiology I 3 3 4  
An integrated unit covering the structure and function of the human body. Dissection of a small mammal and its comparison with man is included.  
Prerequisite: None.

BIO 211 Human Anatomy and  
Physiology II

3 3 4

Continuation of Biology 210.  
Prerequisite: BIO 210.

BIO 230 Microbiology

2 4 4

A study of microorganisms with emphasis on morphology and physiological processes and their relationship to man and his environment. Processes of detection, identification and destruction of pathogenic bacteria will be employed.

Prerequisites: BIO 110, BIO 111, BIO 112 or BIO 210, BIO 211.

## SCIENCE - CHEMISTRY

\*CHEM 101 General Chemistry I

4 3 5

An introductory course concerned with basic principles and laws governing the relationships between the different states of matter: atomic theory; chemical bonding; classification of the elements, their properties and reactions based on the periodic table. Provides laboratory experience.

Prerequisite: Satisfactory score on mathematics placement test.

\*CHEM 102 General Chemistry II

4 3 5

A continuation of Chemistry 101, with emphasis on electrochemistry; and a survey of nuclear and organic chemistry.

Prerequisite: CHEM 101.

\*CHEM 103 General Chemistry III

4 3 5

A study of the qualitative analysis of the common cations and anions, with emphasis on solutions, ionic equilibria, and thermochemistry.

Prerequisite: CHEM 102.

CHEM 110 General Chemistry I

3 3 4

An introductory course concerned with basic principles and laws governing the relationships between the different states of matter: atomic theory; chemical bonding; classification of the elements, their properties and reactions based on the Periodic Table. The laboratory experiments are designed to accent the broad principles discussed in the classroom.

Prerequisite: None.

CHM 111 General Chemistry II

3 3 4

A continuation of Chemistry 110. Topics include spectroscopy, electrochemistry, and a survey of nuclear and organic chemistry.

Prerequisite: CHM 110.

CHM 112 General Chemistry III

2 6 4

Topics include thermachemistry, metallurgy; and a study of the qualitative analysis of the common cations and anions, with emphasis on solutions and ionic equilibria.

Prerequisite: CHM 111.

CHM 201 Quantitative Analysis I

2 6 4

A study of the theories, techniques, and practices of quantitative analysis. Standard procedures in the fields of gravimetric and volumetric analysis discussed and performed.

Prerequisites: CHM 110, 111, 112.

CHM 202 Quantitative Analysis II

2 6 4

A continuation of Chemistry 201, with an introduction to use and theory of gas and to instrumental analysis.

Prerequisites: CHM 110, 111, 112, 201.



- CHM 205 Elementary Organic Chemistry 3 6 6  
An elementary treatment of organic chemistry, emphasizing classes of compounds, their nomenclature, preparation, reactions and uses.  
Prerequisites: CHM 110, 111, 112.

### SCIENCE - PHYSICS

- PHY 201 General Physics I 3 2 4  
The first of three quarters of a beginning course in general college physics. The first quarter will be spent on a study of mechanics, properties of matter, and heat.  
Prerequisite: None.
- PHY 202 General Physics II 3 2 4  
A continuation of Physics 201; topics covered are mechanical wave motion, electricity and magnetism, and electronics.  
Prerequisite: PHY 201.
- PHY 203 General Physics III 3 2 4  
A continuation of Physics 202; topics covered are atomic and nuclear physics and light.  
Prerequisites: PHY 201, 202.

### SCIENCE - SURVEY COURSES

(These courses are primarily intended to serve as science electives for the terminal student. They may serve as an elective science course for the student transferring to a senior institution. They will satisfy the science requirements for elementary education majors at some institutions.)

- SCI 101 Biological Science 3 2 4  
A course designed to emphasize the fundamental principles of biology through the study of the concepts of protoplasmic and cellular organization, growth and differentiation, genetic, and ecological control, and current and past evolution. An integrated lecture and laboratory presentation.  
Prerequisite: None.
- SCI 102 Physical Science Survey I 3 2 4  
A study of the principles of chemistry and geology. Chemistry topics included are: theory and structure of the atom, chemical bonds and reactions, oxidation-reduction, organic compound. Geological principles studied are: earth materials and their history, the atmosphere, erosion and sedimentation, and vulcanism and diastrophism. An integrated lecture and laboratory presentation.  
Prerequisite: None.
- SCI 103 Physical Science Survey II 3 2 4  
A study of the principles of physics and astronomy. All the major divisions of physics will be represented, namely, mechanics, properties of matter, heat, sound, electricity and magnetism, atomic and nuclear physics, and light. The more important principles and facts about the universe and our solar system will be studied, along with their applications to space science.  
Prerequisite: None.

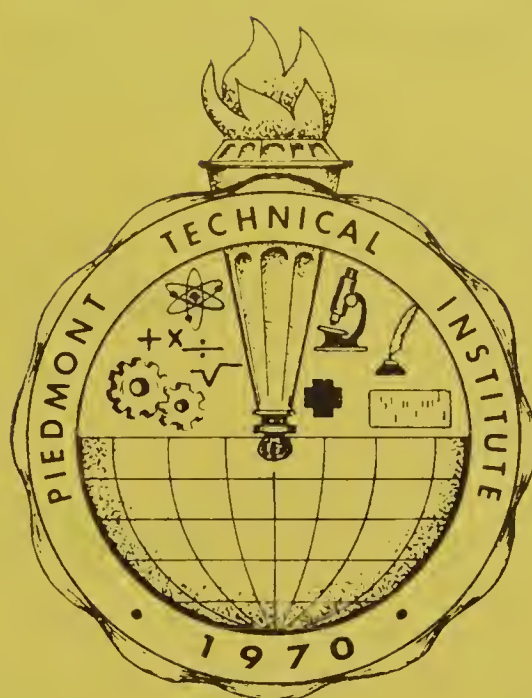
### SOCIAL SCIENCES

- HIS 110 Western Civilization I 5 0 5  
An intensive survey of the forces responsible for the making of modern Europe from 1500 to 1815, with background drawn from the ancient and medieval western world. Among the forces considered: the renaissance: Reformation: Commercial, Agricultural, and Industrial Revolutions; Constitutional Government in England; Eighteenth Century Thought; Imperialism; the French Revolution; and the Congress of Vienna.  
Prerequisite: None.

- HIS 111 Western Civilization II 5 0 5  
A study of the European civilization since the Congress of Vienna. Special attention given to the rise and fall of nazism and fascism, to the development of communism and capitalism, and to the cold war.  
Prerequisite: None.
- HIS 151 United States History I 5 0 5  
A survey of the history of the United States from the discovery of America in 1492 to the end of the Civil War in 1865. Emphasis on the political, economic, social, and cultural developments of the Republic.  
Prerequisite: None.
- HIS 152 United States History II 5 0 5  
A survey of the history of the United States from 1865 to present. Emphasis on the economic development and the rise of the United States as a world power.  
Prerequisite: None.
- POL 201 United States Government 5 0 5  
(POL 101)  
A study of the national government of the United States. The development of the federal institutions and agencies and their relationship to each other and to the citizens of the Republic. Emphasis on basic concepts, structure, procedures, and problems.  
Prerequisite: None.
- POL 202 American State and  
Local Government 5 0 5  
An introduction to the roles of state and local government within the federal system, including a consideration of the organization, functions, and powers of state and local units, state constitutions; and contemporary problems.  
Prerequisite: None.
- PSY 201 Principles of Psychology 5 0 5  
A basic course presenting a study of behavior in terms of perception, motivation, learning, heredity, environment, emotion, and statistical concepts.  
Prerequisite: None.
- PSY 202 Developmental Psychology 5 0 5  
A study of the development and behavior of the individual from conception, through childhood, adolescence, and adulthood, to old age. Emphasis on the interrelation between the biological and social influence.  
Prerequisite: PSY 101.
- SOC 201 Principles of Sociology 5 0 5  
An analysis of the structure and functions of modern society. Illustrates societal conditions which influence individual and mass behavior.  
Prerequisite: None.



# TECHNICAL PROGRAMS



THE INSTITUTION WHERE  
YOU CANNOT FAIL

# CATALOG FOR 1972-1974

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SYSTEMS APPROACH  
AND  
TECHNICAL PROGRAMS

Piedmont Technical Institute offers a number of technical programs leading to the Associate in Applied Science Degree. Traditional schools offer these curriculum programs as two-year programs of either six or seven eleven-week quarters. At Piedmont Tech, the student is allowed to enroll any day of the year and begin working at his own individual learning pace toward meeting the requirements for the Associate Degree. There is no set time limit on when a course will be completed by the student. The length of time from the date of enrollment to the completion of all degree requirements is entirely up to the student.

REQUIREMENTS FOR ASSOCIATE  
IN APPLIED SCIENCE DEGREE

To be eligible for graduation as a candidate for the Associate in Applied Science degree, the student must have completed the following academic requirements:

	Qtr. Hrs. Credit
English and Communication Skills	9 – 15
Social Science electives	6 – 12
Electives in Major Emphasis area (minimum)	71 – 83
Free Electives (minimum)	10
Total quarter credit hours (minimum)	108



## COURSE SELECTION UNDER THE SYSTEMS APPROACH

Each student and his advisor will plan a program of study to meet the student's career plans, as well as the requirements for graduation. Since the individual's course of study will vary from one student to another, no attempt is made to outline a required or suggested curriculum for each program.

Students register for a sequence of courses selected from those described in this catalog. The course objectives of each course in the curriculum are systematically completed as the student progresses through the curriculum. The time each student spends in each class varies with the individual, but, in all cases, the objectives of each course must be mastered before the student registers for the next sequence course.

Remember, time is not important. What is important is that the student enjoys 100% success, not failure, at every step during his course of study.

## GRADING UNDER THE SYSTEMS APPROACH

Grades are not determined by the student's progress at the end of eleven weeks, but by the student successfully completing a course, regardless of the day of the year the course is finished. At Piedmont Tech, a student does not just put in hours, he masters course objectives. Course credit, however, is awarded on the basis of quarter hours.

## BUSINESS ADMINISTRATION, T-018

### Purpose of Curriculum

In North Carolina the opportunities in business are increasing. With the increasing population and industrial development in this State, business has become more competitive and automated. Better opportunities in business will be filled by students with specialized education beyond the high school level. The Business Administration Curriculum is designed to prepare the student for employment in one of many occupations common to business. Training is aimed at preparing the student in many phases of administrative work that might be encountered in the average business.

The specific objectives of the Business Administration Curriculum are to develop the following competencies:

1. Understanding of the principles of organization and management in business operations.
2. Understanding our economy through study and analysis of the role of production and marketing.
3. Knowledge in specific elements of accounting, finance, and business law.
4. Understanding and skill in effective communication for business.
5. Knowledge of human relations as they apply to successful business operations in a rapidly expanding economy.

### Job Description

The graduate of the Business Administration Curriculum may enter a variety of career opportunities from beginning sales person or office clerk to manager trainee. The duties and responsibilities of this graduate vary in different firms. These encompassments might include: making up and filing reports, tabulating and posting data in various books, sending out bills, checking calculations, adjusting complaints, operating various office machines, and assisting managers in supervising. Positions are available in business such as advertising; banking; credit; finance; retailing; wholesaling; hotel, tourist, and travel industry; insurance; transportation; and communications.



## SECRETARIAL—EXECUTIVE, T—030

### Purpose of Curriculum

The demand for better qualified secretaries in our ever-expanding business world is becoming more acute. The purpose of this curriculum is to outline a training program that will provide training in the accepted procedures required by the business world and to enable persons to become proficient soon after accepting employment in the business office.

The Executive Secretary Curriculum is designed to offer the student the necessary secretarial skills in typing, dictation, transcription, and terminology for employment in the business world. The special training in secretarial subjects is supplemented by related courses in mathematics, accounting, business law, and personality development.

### Job Description

The graduate of the Executive Secretary Curriculum should have a knowledge of business terminology, skill in dictation, and accurate transcription of business letters and reports. The graduate may be employed as a stenographer or a secretary. Stenographers are primarily responsible for taking dictation and transcribing letters, memoranda, or reports. The secretary, in addition to taking dictation and transcribing, is given more responsibility in connection with meeting office callers, screening telephone calls, and being an assistant to an executive. She may enter a secretarial position in a variety of offices in businesses such as insurance companies, banks, marketing institutions, and financial firms.



## GENERAL OFFICE TECHNOLOGY, T-033

### Purpose of Curriculum

Because more people are employed in clerical jobs than in any other field, there is a real need for trained personnel who can do the routine daily work in an office.

The General Office curriculum is a two-year technical program designed for those people who do want employment in the business world but do not want to specialize in shorthand or accounting. Specialized training is given in typing, filing, and machine transcription. This is supplemented by a study in business related courses and in human relations and psychology. This course of study will give a person the necessary knowledge and training to assume routine office work responsibilities and to do machine transcription.

### Job Description

The graduate of the General Office Curriculum may be employed as a file clerk, machine transcriptionist, typist, receptionist, cashier, billing clerk, shipping clerk, payroll clerk, and other clerical-related jobs. Opportunities are available in government offices and in almost every type of business, large or small.

## DATA PROCESSING TECHNOLOGY, T-022

The data processing field is one of the most rapidly expanding areas today. One who chooses data processing as a career can expect an exciting and challenging future with many advancement opportunities. The data processing curriculum is designed to familiarize the student with data processing theory and equipment and to broaden the student's business knowledge.

The specific objectives of the data processing curriculum are to develop: (1) general knowledge of the basic types and uses of data processing equipment; (2) knowledge of various programming procedures and programming languages; (3) technical understanding of the over-all concept of data processing for employment leading to a position as a systems analyst.

The data processing technology graduate will fulfill the requirements for numerous positions. Some are key punch operators, tab machines operators, and computer programmers. Immediate employment is available for the graduates in the data processing curriculum.

## ACCOUNTING, T-016

### Purpose of Curriculum

Accounting is one of the fastest growing employment fields in America today, and the job outlook for good accountants seems bright for many years to come. These opportunities result from the tremendous business and industrial expansion in all parts of the country. There is a growing need for trained people in the area of accounting to help managers keep track of a firm's operation. The Accounting Curriculum is designed to fill this need by offering students the necessary accounting theories and skills for the entry into the accounting profession.

The specific objectives of the Accounting Curriculum are to develop the following competencies:

1. Understanding of the principles of organization and management in business operations.
2. Understanding of the fundamentals of accounting and analysis of financial statements.
3. Knowledge and skill in effective communications for business.

### Job Description

The duties and responsibilities of an accountant vary somewhat in different firms. Some of the duties an accountant might have are as follows: record transactions, render periodic reports, maintain cost records, make special reports, complete tax returns, audit the books, and advise management in areas of financial affairs.

The graduates of the Accounting Curriculum may qualify for various jobs in business and industry leading to any of the following accounting positions: accounting clerks, payroll clerks, accounting machine operators, auditors, and cost accountants. Further experience should prepare them to become office managers, accounting supervisors, and to fill other responsible positions in a business firm.



## AGRICULTURAL BUSINESS TECHNOLOGY

### T-001

#### Purpose of Curriculum

Rapid technological changes in farming and related agricultural businesses have given rise to the need for more technically trained people. A variety of agricultural businesses and industries employ persons to assist in marketing, processing, and distributing of farm products and providing services to the farmer. Many responsible positions in agricultural businesses and industries require technical training not available in high schools or in four-year colleges.

Agricultural production is undergoing tremendous changes. The trends are to larger, highly mechanized and specialized farms with huge capital investments. This means that there will be an increasing demand for capable farm managers to coordinate the purchasing, production and marketing of these larger agricultural production operations.

Farm managers of the future must possess greater technical competence to remain in the highly competitive production phase of agriculture. They must be able to cope with present production problems and adapt to rapid technological changes.

It is anticipated that changes in agriculture and the general economic environment will occur at a faster rate in the future. Profitable management of agricultural operations will demand successful adjustment to these changes. Decisions involved in these adjustments will require an individual with more training, knowledge and ability.

The Agricultural Business Curriculum is designed to help students acquire knowledge, understandings, and abilities in the broad field of agricultural business, including agricultural production. It combines knowledge of agriculture with business training to prepare the graduate for many of the varied employment opportunities in agriculture. The specific objectives of the Agricultural Business Curriculum are to develop the following student competencies:

1. Understanding of the principles of organization and

- management in agricultural businesses and industries.
2. Understanding of the application of the principles of business management to agricultural production, and the abilities essential to the management of an efficient well-organized farming operation.
  3. Understanding of the basic principles of our economic system, marketing, credit, price concepts and governmental policies and programs relating to agriculture.
  4. Understanding of the agricultural sciences most essential to the production and marketing of agricultural products, including knowledge of the animal, plant, and soil sciences and their relationships with ability to apply these educational experiences to practical problems of agricultural business and industry.

### Job Description

As agricultural business and industry firms expand in size and number they are experiencing rapid changes in technologies of production, sales, and management, in an increasingly competitive environment. Future employees of such firms must be prepared to understand these changes and adapt themselves accordingly. Successful completion of this curriculum should enable a person to assume responsibilities in an agricultural firm and should enable him to advance within such a business.

Upon graduation from this curriculum an individual should qualify for various jobs in agricultural business and industry such as salesman or store manager in farm supply stores; agricultural field serviceman; salesman, demonstrator or plant manager of feed and food companies; farm products inspector; salesman, or office managers of farm products marketing firms.

The trend towards larger farming operations with increased non-farm control of production means there will be greater employment opportunities for well-trained individuals who can efficiently and profitably supervise the production and marketing of agricultural products.



## AGRICULTURAL SCIENCE

## AND

## MECHANIZATION, T-017

## INTRODUCTION

## Purpose of Curriculum

This curriculum provides a training program for developing the basic knowledge and skills needed for the successful operation and management of a general farming program involving crops and livestock. There is a growing scarcity of young men trained in basic agriculture science and mechanics. Larger farming operations require more mechanization and tremendous outlays of capital; thus, the need for trained farmers becomes increasingly critical. The objective of this curriculum is to provide the managerial and operative training needed for successful farm operation.

## Job Description

The graduate of the General Agriculture and Mechanics curriculum is trained to manage and operate a farm. In addition he should be able to perform most of the repairs to buildings and equipment as well as perform the necessary electrical, construction and plumbing requirements pertaining to the farm operation.



## TEACHER ASSISTANT, T-088

### Purpose of the Curriculum

Piedmont Technical Institute offers an Associate of Applied Science Degree in Teacher Assistant Technology to meet the acute shortage of semi-professional personnel in education. The curriculum, constructed with the advice of practicing teacher assistants and approved by the State of North Carolina, prepares the student to assist teachers in today's challenging educational system. The purpose of the program is three-fold: (1) to prepare the student to be the "right arm" of the professional teacher, (2) to provide a practical course of study which will adequately prepare the student for the classroom environment, and (3) to lay a solid foundation for the student who wishes to become a fully certified teacher.

The course is most convenient and highly practical because it combines classroom participation with on-the-job learning. All the learning activities are offered in your immediate community and are taught by your professional educators. It is the only professional course of study that is uniquely tailored to your needs.

### Job Description

The graduate of the Teacher Assistant Curriculum may enter a variety of career opportunities in the public school system in North Carolina. The duties and responsibilities of the graduate will vary in different systems. However, the graduate will be most directly involved in a learning process and will be an important asset to any system. Superintendents in our area have encouraged us to offer this curriculum indicating that they have extensive need of this type personnel.

## DRAFTING & DESIGN—MECHANICAL, T-043

### Purpose of Curriculum

This curriculum is designed to equip the student for the basic duties common to all technicians of this general classification and to enable the individual student to become proficient in a short time after he becomes employed in the industry.

Courses in general education have been included to give students the assurance and understanding that comes with education at a broad base. The technician associates with many levels of thought and expression. Administrative personnel, scientists, engineers, and skilled workmen must be able to communicate effectively with all aspects of knowledge such as mathematics, physics, and mechanics. These subjects have been included in order to provide the students with a better academic base for their training. Emphasis is placed upon ability to think and plan, as well as drafting procedures and techniques.

### Job Description

Mechanical drafting and design technicians are concerned with the preparation of drawings for design proposals, for experimental models, and items for production use. These technicians perform aspects of design in a specialized field, such as the developing of the design of a section, sub-assembly, or major component. Investigating design factors and availability of material and equipment, production methods, and facilities are frequent assignments. They also design units and controls from specifications by utilizing drawings of existing units and reports of functional performance.

Technicians are employed in many types of manufacturing, fabrication, research development, and service industries. Many are also employed in communications, transportation, public utilities, consulting engineering firms, as well as federal, state, and local governments.



## INDUSTRIAL MANAGEMENT

### Purpose of Curriculum

Industry's needs in positions of supervision and mid-management have grown extensively with the development of new methods of manufacturing and with the increase in the national economy. This need has added emphasis to the necessity for well-trained individuals that can understand new methods and keep abreast of trends in the economy. The supervisor and persons in mid-management must be concerned daily with human behavior and the psychological factors which affect personnel working under their direction. They must also be conscious of the responsibilities of their position toward the total economic well being of the industry.

These requirements have set forth the objectives in developing this program to prepare people for supervisory and mid-management responsibilities in industry.

The program is prepared to develop the individual's abilities in the art of communicating with his fellow worker by providing him with training in business and industrial management, psychology, production methods, and the general and social education that broadens one's perspective. This training should provide one with the opportunity to enter into an industrial occupation and, with experience, assume the responsibilities that go with supervisory and mid-management positions in industry.

### Job Description

The supervisor or foreman coordinates the activities of workers in one or more occupations. His duties may encompass the interpreting of company policies to workers, involvement in planning of production schedules and estimating of man hour requirements for job completion, establishment or adjustment of work procedures, analyzes and resolves work problems, and initiates or suggests plans to motivate workers to achieve work goals.



## COURSE DESCRIPTIONS FOR TECHNICAL PROGRAMS

The courses suggested for each of the Associate Degree programs described in this section of the catalog is described on the following pages. Courses are listed alphabetically by subject area and identified by the three letter and three number prefix as shown in the suggested curriculum. A course number followed by a "P" indicates a course developed specifically by Piedmont Technical Institute.

Following each course number is the course title, and the number of class hours, lab hours for each course per week, and the quarter hours of credit given for successfully completing the course.

## AGRICULTURE

	Hours Per Week		Quarter Credit Hours
	Class	Lab	
AGR 101 Farm Tractor Mechanics I	8	0	8
A study of farm tractors including gas and diesel engines. Units to be studied include engines, ignition, electrical, braking, cooling and transmission systems.			
AGR 102 Farm Business Management I	2	0	2
A review of the functions of the manager of a business firm and the problems of farm operators. Development of the concepts of costs and budgets as an aid in choosing what to produce. An analysis of the factors of production to find the least cost production procedure. Data will be analyzed to select the level of production that yields the highest net revenue. Relationships between size, efficiency and gross farm income and net farm income will be stressed.			
AGR 103 Farm Tractor Mechanics II	4	0	4
A continuation of AGR 101.			
AGR 104 Swine Feeding and Management	2	0	2
A study of the scientific methods of selecting, breeding, feeding and management of swine. Special attention will be given to housing and marketing.			
AGR 105 Pastures and Forage Crops	2	0	2
A study of the major grasses and legumes of economic importance in North Carolina. Attention will be given to management, soil types, fertilization, harvesting and nutrient value.			
AGR 106 Techniques of Welding I	4	0	4
This course will cover both arc and gas welding. The safe and correct methods of assembling and operating welding equipment will be stressed. Welded joints and flame cutting are discussed and practiced in various positions that are applicable to mechanical repair work and steel fabrication. Care, maintenance, and selecting welding equipment and supplies are applied in this course.			
AGR 107 Farm Accounting and Records	2	0	2
An introductory course to accounting methods related to farm needs which acquaints the student with terminology, basic principles and techniques used in recording transactions. Practical application of the principles learned are made by working with actual farm situations.			
AGR 108 Beef Production	2	0	2
A study of the principles of selecting, breeding, feeding, care and management of beef cattle.			
AGR 109 Soil Science	2	0	2
This course deals with the development, classification, evaluation and management of soils; care, cultivation and conservation of soil fertilization.			

AGR 110 Techniques of Welding II	8	0	8
A continuation of AGR 106.			
AGR 111 Farm Electrification I	8	0	8
A study of basic principles of wiring farm buildings and the application of electricity to agriculture production.			
AGR 112 Farm Electrification II	4	0	4
A continuation of AGR 111.			
AGR 113 Techniques of Welding III	2	0	2
A continuation of AGR 106 and AGR 110.			
AGR 119 Introduction to Agricultural Economics	3	2	4
An introduction to economics, the functions of the economic system and agriculture's role in the economy. A review of the functions of the manager and an introduction to the principles he uses in making decisions to adjust to changing conditions. Analysis of the main sources of changes which affect agricultural firms.			
Prerequisite: None.			
AGR 117 Feeds and Feeding Farm Animals	2	0	2
A study of the composition of feeds, feed additives, and the nutritional requirements of livestock. The course includes a study of the principles used in the formulation of practical and economical livestock rations.			
AGR 118 Feed Grain Crops	2	0	2
This course stresses the value of scientific methods in the production of corn, oats, wheat, barley and sorghum. Varieties, soils, fertilization, cultivation, harvesting and utilization are included.			
AGR 121 Weed Identification & Control	2	0	2
A study dealing with the identification and control of annual and perennial weeds and grasses of economic importance in North Carolina.			
AGR 122 Farm Machinery Repair and Maintenance I	4	0	4
This course emphasizes the proper care of farm machinery and the economic value of proper servicing and management. All kinds of farm machinery will be utilized and the student will develop skills through actual demonstrations and shop practice.			
AGR 123 Farm Machinery Maintenance and Repair II	8	0	8
A continuation of AGR 122.			



- |  |   |   |   |
|--|---|---|---|
| AGR 124 Plant Propagation  | 2 | 0 | 2 |
| The various means of plant reproduction are scientifically studied. Special attention is given to the propagation of shrubs for the home landscape plan.   |   |   |   |
| AGR 125 Farm Business Management II  | 2 | 0 | 2 |
| A continuation of AGR 102.   |   |   |   |
| AGR 126 Farm Forest Management   | 2 | 0 | 2 |
| A course dealing with the fundamentals of forestry and farm forestry problems including planting, thinning, harvesting and marketing.  |   |   |   |
| AGR 128 Farm and Home Construction I   | 8 | 0 | 8 |
| This course deals with the fundamentals of farm carpentry, fences, concrete and masonry. Part of the course given students an opportunity to learn and practice home construction projects such as kitchen cabinets.   |   |   |   |
| AGR 129 Farm and Home Construction II  | 4 | 0 | 4 |
| A continuation of AGR 128.   |   |   |   |
| AGR 130 Pesticides   | 2 | 0 | 2 |
| A study of the beneficial and harmful insects affecting farm production in North Carolina and the methods of control.  |   |   |   |
| AGR 131 Animal Science   | 5 | 2 | 6 |
| An introductory animal science course covering the fundamental principles of livestock production. A study of the animal body and basic principles of reproduction, genetics growth, fattening, digestion, along with the selection, feeding, improvement, processing and marketing of livestock.<br>Prerequisite: None. |   |   |   |
| AGR 132 Livestock Diseases & Parasites   | 2 | 0 | 2 |
| A course dealing with the common diseases and parasites of livestock; sanitation practices and procedures with emphasis on the cause, damage, symptoms, prevention and treatment of parasites and diseases, and management factors relating to disease and parasite prevention and control.                              |   |   |   |
| AGR 133 Farm Water & Plumbing Systems I  | 4 | 0 | 4 |
| This course is a study of the farm water needs and waste disposal. Attention is given to planning and installing the system and its proper care and maintenance.   |   |   |   |
| AGR 134 Tobacco Production   | 2 | 0 | 2 |
| This course discusses the production practices that are relevant to flue cured tobacco in North Carolina. Emphasized will be plant bed practices and field production — machinery, cultural practices, fertilization, harvesting and marketing.  |   |   |   |
| AGR 135 Agriculture Law  | 2 | 0 | 2 |
| A general course designed to acquaint the student with certain fundamentals and principles of law, including contracts, agency and negotiable instruments. Includes the general study of law pertaining to partnership, corporation, sales, suretyship, bailments, and real property.                                    |   |   |   |

## AGR 136 Agriculture Math 2 0 2

This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business.

AGR 137 Farm and Home Appliance  
Repair I 8 0 8

This course teaches the student how to repair all home appliances with emphasis on commonly used electrical appliances and machines in the home or on the farm.

## AGR 138 Farm Records and Taxes 2 0 2

This is a study of the records necessary to properly complete a tax form and the procedures and skills needed for income tax computations.

## AGR 139 Fertilizers and Lime 2 0 2

A review of the sources, function, and the use of the major and minor plant food elements; commercial fertilizer ingredients; soil acidity, liming materials; application of fertilizer and liming materials.

## AGR 140 Vegetable Production 2 0 2

## AGR 141 Surveying I 4 0 4

Theory and practice of elementary plane surveying including horizontal measurements, differential and profile leveling, cross sections, earth-work computations, transit, stadia, and transit-tape surveys.

## AGR 142 Agriculture Finance 2 0 2

Analysis of the capital structure of modern commercial agriculture with emphasis on the sources of credit. A review of lending institutions, repayment, schedules, and credit instruments. Practice in the procedure of evaluating farm resources with attention to information needed for valuation, appraisal forms and procedures, discounting and depreciation.

## AGR 143 New Sources of Farm Income 2 0 2

This is a study of new areas of production that are not in practice in the student's present farming program. The farm enterprise system will be analyzed and new enterprises suggested.

AGR 144 Opportunities in Agriculture  
Business 2 0 2

This course presents the opportunities for part or full-time employment in farm related occupations. Agriculture businesses such as feeds and fertilizers as well as farm custom machinery work is considered.



AGR 145 Farm Water and Plumbing Systems II	8	0	8
A continuation of AGR 133.			
AGR 146 Farm and Home Appliance Repair	4	0	4
A continuation of AGR 137.			
AGR 147 Surveying II	8	0	8
A continuation of AGR 141.			
AGR 148 Techniques of Welding IV	6	0	6
A continuation of AGR 106, AGR 110 and AGR 113.			
AGR 149 Farm Tractor Mechanics III	6	0	6
A continuation of AGR 101 and AGR 103.			
AGR 150 Farm Machinery Maintenance and Repair III	6	0	6
A continuation of AGR 122 and AGR 123.			
AGR 151 through AGR 163 Internship (Farm Co-op program only)	0	24	6
An internship is required of all farmers enrolled in the Farm Co-op. program sponsored under the Veterans Administration. These students are scheduled for an internship beginning with AGR 151 and continuing in sequence each quarter until completion of the program. Each farmer is required to develop and present a plan of total farm operation, with specific application each quarter of the skills and techniques studied during that quarter in his other courses. By the end of the total co-op, program, a comprehensive plan for improved farm operation will have been developed.			
AGR 170 Plant Science	5	2	6
An introductory general botany and crop science course covering the fundamental principles of the reproduction, growth, functions, and development of seed bearing plants with application to certain commercially important plants in North Carolina.			
Prerequisite: None.			
AGR 185 Soil Science and Fertilizers	5	2	6
A course dealing with basic principles of efficient classification, evaluation, and management of soils; care, cultivation, and fertilization of the soil, and conservation of soil fertility.			
Prerequisite: None.			
AGR 201 Agricultural Chemicals	5	2	6
A study of farm chemical pesticides, their ingredients, formulation, and farm application, with emphasis on the effective and safe use of chemicals in agricultural pest control.			
Prerequisite: None.			



## AGR 204 Farm Business Management 5 2 6

A review of the functions of the manager of a business firm and the problems he faces. Development of the concept of planning by both partial and complete budgeting. Review of the concepts of costs and the length of run in production. Practice in preparing enterprise budgets as an aid in choosing what to produce. Use of partial budgeting to fund the least cost production procedure. Analysis of production data to select the level of production that yields the most net revenue. Relationship between size, efficiency and income of a farm. Review of procedures for evaluating the efficiency of the manager. Prerequisite: None.

## AGR 205 Agricultural Marketing 5 2 6

An analysis of the functions of marketing in the economy and a survey of the problems marketing faces. A review of the market structure and the relationship of local, terminal, wholesale, retail and foreign markets. Problems in the operations of marketing firms including buying and selling, processing, standardization and grading, risk taking and storage, financing, efficiency, and cooperation. Discussion of procedures of marketing such commodities as grain, cotton, livestock and tobacco.

## AGR 218 Agricultural Mechanization 3 2 4

A study of farm machinery management and labor-saving devices. The economics of selection and operation of farm machinery. Study and evaluation of feed grinders, and mixers, storage facilities, materials handling systems and other labor-saving devices. Prerequisite: None.

## AGR 228 Livestock Diseases and Parasites 3 2 4

A course dealing with the common diseases and parasites of livestock; sanitation practices and procedures with emphasis on the cause, damage, symptoms, prevention and treatment of parasites and diseases, and management factors relating to disease and parasite prevention and control. Prerequisite: AGR 125.

## BUSINESS

## BUS 101 Introduction to Business 5 0 5

A survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization and management. Prerequisite: None.

- |  |                 |   |   |   |
|--|-----------------|---|---|---|
| BUS 102  | Typewriting     | 2 | 3 | 3 |
| <p>Introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts.<br/>Prerequisite: None.</p>   |                 |   |   |   |
| BUS 103  | Typewriting     | 2 | 3 | 3 |
| <p>Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms.<br/>Prerequisite: BUS 102 or the equivalent. Speed requirement, 30 words per minute for five minutes.</p>                                       |                 |   |   |   |
| BUS 104  | Typewriting     | 2 | 3 | 3 |
| <p>Emphasis on production typing problems and speed building. Attention to the development of the student's ability to function as an expert typist, producing mailable copies. The production units are tabulation, manuscript, correspondence, and business forms.<br/>Prerequisite: BUS 103 or the equivalent. Speed requirement, 40 words per minute for five minutes.</p> |                 |   |   |   |
| BUS 106  | Shorthand       | 3 | 2 | 4 |
| <p>A beginning course in the theory and practice of reading and writing shorthand. Emphasis on phonetics, penmanship, word families, brief forms and phrases.<br/>Prerequisite: None.</p>  |                 |   |   |   |
| BUS 107  | Shorthand       | 3 | 2 | 4 |
| <p>Continued study of theory with greater emphasis on dictation and elementary transcription.<br/>Prerequisite: BUS 106 or the equivalent.</p>   |                 |   |   |   |
| BUS 108  | Shorthand       | 3 | 2 | 4 |
| <p>Theory and speed building. Introduction to office style dictation. Emphasis on development of speed in dictation and accuracy in transcription.<br/>Prerequisite: BUS 107.</p>  |                 |   |   |   |
| BUS 110  | Office Machines | 2 | 2 | 3 |
| <p>A general survey of the business and office machines. Students will receive training in techniques, processes, operation and application of the ten-key adding machines, full keyboard adding machines, and calculator.</p>   |                 |   |   |   |
| BUS 112  | Filing          | 3 | 0 | 3 |
| <p>Fundamentals of indexing and filing, combining theory and practice by the use of miniature letters, filing boxes and guides. Alphabetic, Triple Check, Automatic, Geographic, Subject, Soundex, and Dewey Decimal filing.<br/>Prerequisite: None.</p>   |                 |   |   |   |
| BUS 115  | Business Law    | 3 | 0 | 3 |
| <p>A general course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies.<br/>Prerequisite: None.</p>  |                 |   |   |   |



- BUS 116 Business Law 3 0 3  
Includes the study of laws pertaining to bailments, sales, risk-bearing, partnership-corporation, mortgages, and property rights.  
Prerequisite: BUS 115.
- BUS 120 Accounting 5 2 6  
Principles, techniques and tools of accounting, for understanding of the mechanics of accounting. Collecting, summarizing, analyzing, and reporting information about service and mercantile enterprises, to include practical application of the principles learned.  
Prerequisite: MAT 110.
- BUS 121 Accounting 5 2 6  
Partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on the recording, summarizing and interpreting data for management control rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems.  
Prerequisite: BUS 120.
- BUS 123 Business Finance 3 0 3  
Financing of business units, as individuals, partnerships, corporations, and trusts. A detailed study is made of short-term, long-term, and consumer financing.  
Prerequisite: None.
- BUS 124 Business Finance 3 0 3  
Financing, federal, state, and local government and the ensuing effects upon the economy. Factors affecting supply of funds, monetary and credit policies.  
Prerequisite: BUS 123.
- BUS 205 Advanced Typewriting 2 3 3  
Emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects that closely approximate the work appropriate to the field of study. These projects include review of letter forms, methods of duplication, statistical tabulation, and the typing of reports, manuscripts and legal documents.  
Prerequisite: BUS 104, Speed requirement, 50 words per minute for five minutes.
- BUS 206 Dictation and Transcription 3 2 4  
Develops the skill of taking dictation and of transcribing at the typewriter materials appropriate to the course of study, which includes a review of the theory and the dictation of familiar and unfamiliar material at varying rates of speed. Minimum dictation rate of 100 words per minute required for five minutes on new material.  
Prerequisite: BUS 108.
- BUS 207 Dictation and Transcription 3 2 4  
Covering materials appropriate to the course of study, the student develops the accuracy, speed, and vocabulary that will enable her to meet the stenographic requirements of business and professional offices. Minimum dictation rate of 110 words per minute required for five minutes on new material.  
Prerequisite: BUS 206.



- BUS 208 Dictation and Transcription** 3 2 4  
Principally a speed building course, covering materials appropriate to the course of study, with emphasis on speed as well as accuracy. Minimum dictation rate of 120 words per minute required for five minutes on new material.  
Prerequisite: BUS 207.
- BUS 210 Office Practice Typing** 2 3 3  
Designed to familiarize student with the forms and routines found in a typical business. Emphasis is placed upon correct procedures and adaptability to varying office methods.  
Prerequisite: BUS 205.
- BUS 211 Office Machines** 2 2 3  
Instructions in the operation of the bookkeeping-accounting machines, duplicating equipment, and the dictating and transcribing machines.  
Prerequisite: BUS 110.
- BUS 212 Machine Transcription** 2 2 3  
A study and practice course in the use of transcribing machines in business dictation. Proficiency in word usage, correct grammar, and letter styles will be emphasized.  
Prerequisite: BUS 103.
- BUS 213 Office Procedures** 5 0 5  
Designed to acquaint the student with the responsibilities encountered by a general office worker during the work day. These include the following: receptionist duties, handling the mail, telephone techniques, travel information, telegrams, office records, purchasing of supplies, office organization, and scheduling appointments. The student will be helped with certain problem areas such as how to handle callers who do not have an appointment but insist on seeing the boss when he is busy.  
Prerequisite: None.
- BUS 214 Secretarial Procedures** 3 2 4  
Designed to acquaint the student with the responsibilities encountered by a secretary during the work day. These include the following: receptionist duties, handling the mail, telephone techniques, travel information, telegrams, office records, purchasing of supplies, office organization, and insurance claims.  
Prerequisite: None.
- BUS 222 Accounting** 3 2 4  
Thorough treatment of the field of general accounting, providing the necessary foundation for specialized studies that follow. The course includes, among other aspects, the balance sheet, income and surplus statements, fundamental processes of recording, cash and temporary investments, and analysis of working capital.  
Prerequisite: BUS 122.

- |                    |   |   |   |
|--------------------|---|---|---|
| BUS 223 Accounting | 3 | 2 | 4 |
|--------------------|---|---|---|
- Additional study of intermediate accounting with emphasis on investments, plant and equipment, intangible assets and deferred charges, long-term liabilities, paid-in capital, retained earnings, and special analytical processes.  
Prerequisite: BUS 222.
- |                         |   |   |   |
|-------------------------|---|---|---|
| BUS 225 Cost Accounting | 3 | 2 | 4 |
|-------------------------|---|---|---|
- Nature and purposes of cost accounting; accounting for direct labor, materials, and factory burden; job cost, and standard cost principles and procedures; selling and distribution cost; budgets, and executive use of cost figures.  
Prerequisite: BUS 121.
- |               |   |   |   |
|---------------|---|---|---|
| BUS 229 Taxes | 3 | 2 | 4 |
|---------------|---|---|---|
- Application of federal and state taxes to various businesses and business conditions. A study of the following taxes: income payroll, intangible, capital gain, sales and use, excise, and inheritance.  
Prerequisite: BUS 121.
- |                           |   |   |   |
|---------------------------|---|---|---|
| BUS 232 Sales Development | 3 | 0 | 3 |
|---------------------------|---|---|---|
- A study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations required.  
Prerequisite: None.
- |                              |   |   |   |
|------------------------------|---|---|---|
| BUS 233 Personnel Management | 3 | 0 | 3 |
|------------------------------|---|---|---|
- Principles of organization and management of personnel, procurement, training, performance reviews, fringe benefits and security are given attention. Methods of evaluating individual performance and the conducting of performance reviews are stressed.
- |                             |   |   |   |
|-----------------------------|---|---|---|
| BUS 235 Business Management | 3 | 0 | 3 |
|-----------------------------|---|---|---|
- Principles of business management including overview of major functions of management, such as planning, staffing, controlling, directing, and financing. Clarification of the decision-making function versus the operating function. Role of management in business—qualifications and requirements.  
Prerequisite: None.
- |                   |   |   |   |
|-------------------|---|---|---|
| BUS 239 Marketing | 5 | 0 | 5 |
|-------------------|---|---|---|
- A general survey of the field of marketing, with a detailed study of the functions, policies, and institutions involved in the marketing process.  
Prerequisite: None.
- |                     |   |   |   |
|---------------------|---|---|---|
| BUS 243 Advertising | 3 | 2 | 4 |
|---------------------|---|---|---|
- The role of advertising in a free economy and its place in the media of mass communications. A study of advertising appeals; product and market research; selection of media; means of testing effectiveness of advertising. Theory and practice of writing advertising copy for various media.  
Prerequisite: None.
- |                  |   |   |   |
|------------------|---|---|---|
| BUS 269 Auditing | 3 | 2 | 4 |
|------------------|---|---|---|
- Principles of conducting audits and investigations; setting up accounts based upon audits; collecting data on working papers; arranging and systemizing the audit, and writing the audit report. Emphasis is placed on detailed audits, internal auditing, and internal control.  
Prerequisite: BUS 223.



- BUS 271 Office Management** 3 0 3  
Presents the fundamental principles of office management. Emphasis on the role of office management including its functions, office automation, planning, controlling, organizing and actuating office problems.  
Prerequisite: None.
- BUS 272 Principles of Supervision** 3 0 3  
Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associates. Emphasis on securing an effective work force and the role of the supervisor. Methods of supervision are stressed.  
Prerequisite: None.
- BUS 273 Principles of Industrial Supervision** 3 2 4  
Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associates. Methods of supervision are stressed. Self-evaluation and improvement of individual performance is gained through the lab experience.

## DRAFTING

- DFT 101 Technical Drafting** 0 6 2  
The field of drafting is introduced as the student begins the study of drawing principles and practices for print reading and describing objects in the graphic language. Basic skills and techniques of drafting included are: use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric construction, orthographic instrument drawing of principal views, and standards and practices of dimensioning. The principles of isometric, oblique, and perspective are introduced.  
Prerequisite: None.
- DFT 102 Technical Drafting** 2 6 4  
Auxiliary views are introduced to the student. Basic dimensioning and tolerancing practices are explained. Emphasis is placed on sectioning and conventions; stress is placed on using proper dimensioning and tolerancing practices, and in proper specification of surface finish. An introduction is given to intersections and development of surfaces. Screw threads and other types of fasteners are introduced.  
Prerequisite: DFT 101.
- DFT 103 Technical Drafting** 2 6 4  
The use and make-up of working drawings is covered including detail part drawings and assembly drawings. Engineering charts and graphs are introduced to the student. Emphasis is placed on the drawing of gears and cams, jigs and fixtures, piping, and secondarily on the use of schematic drawings in hydraulic, pneumatic and electrical and electronic areas.  
Prerequisites: DFT 101 and 102.
- DFT 201 Technical Drafting** 2 6 4  
This course is a continuation of the 101, 102 and 103 series drafting courses and involves additional work on gears and cams, with methods of calculating and specifying dimensions, etc. Further work is done with charts and graphs as related to engineering data. The first original mechanical design work done by the student is started in this course.  
Prerequisite: DFT 103.



## DFT 204 Descriptive Geometry 2 4 4

Graphic analysis of space problems involving point, lines, planes, connectors, and a combination of these. Practical design problems will be stressed with analytical verification where applicable. Visualization shall be stressed on every problem.

Prerequisites: DFT 102, MAT 102.

## DFT 205 Design Drafting I 2 6 4

This course marks the real beginning of original design work done by the student. The student is required to use the drafting knowledge and abilities gained in the previous drafting courses to undertake the required design and drafting work connected with a selected problem or problems. Complete working drawings of the product are required.

Prerequisites: DFT 103, 201.

## DFT 206 Design Drafting II 2 6 4

This course is a continuation of DFT 205. More complex design problem(s) are required and more emphasis is placed on the engineering calculations necessary in the design. Design sketches, calculations, specifications, and other necessary materials (such as layout drawings, etc.) will be required but detail working drawings of the design will not be required.

Prerequisites: MAT 103, PHY 106, PHY 102, DFT 205, MEC 205.

## DFT 211 Mechanisms 3 2 4

Mathematical and graphical solutions of problems involving the principles of machine elements. The study of motions of linkage, velocities and acceleration of points within a link mechanism and layout methods for designing cams, gears, and gear trains are included in the course.

Prerequisites: MAT 103, DFT 201 and 204.

## DATA PROCESSING

## EDP 102 Functional Wiring Principles 2 0 4

The fundamental principles of wiring necessary to perform basic machine functions of printing, punching, comparing and selection. A series of laboratory experiments support the theoretical aspects of this course.

Prerequisite: EDP 104.

## EDP 104 Introduction to Data

## Processing Systems 3 2 4

Fundamental concepts and operational principles of data processing systems, as an aid in developing a basic knowledge of computers, prerequisite for all programming courses.

Prerequisite: BUS 102 or equivalent.

## EDP 105 Procedure Writing, Flow

## Charting, &amp; Block Diagraming 3 2 4

Designed to provide the student with concepts and principles of block diagraming and flow charting. The student will be adequately prepared to write job descriptions. It also enables the student to make block diagrams of existing data processing installations and to block diagram new jobs.

Prerequisite: EDP 102.

## EDP 201 Introduction to Computers

3 2 4

This is a basic introduction to computers. It will give the student a fundamental knowledge of computers, what they are, and how they work. It will also cover the core, card, disk, tape, transmitter, software and hardware. Prerequisite: EDP 105.

EDP 210 Report Program Generator  
(RPG) Programming

3 2 4

This course will provide the student with sufficient knowledge to program and utilize the RPG language at any level. The student will analyze, evaluate and program commercial applications.

Prerequisite: EDP 201.

EDP 211 Report Program Generator  
(RPG) Programming

3 2 4

This course is a continuation of EDP 210.

Prerequisite: EDP 210.

## EDP 215 PL/1 Language

2 4 4

This course is designed to give the student an introduction to the PL/1 language and to provide him with basic skills in the use of this language. The course will provide only basic knowledge of PL/1 and the student will be able to do limited programming utilizing the PL/1 language.

Prerequisite: EDP 211.

## EDP 220 Systems Analyst Project

1 4 3

This course is a summation of the skills and knowledge learned which will now be demonstrated in a practical application. Each student will be required to complete one separate project with minimum supervision from the instructor.

Prerequisite: EDP 210.

## ECONOMICS

## ECO 102 Economics

3 0 3

The fundamental principles of economics including the institutions and practices by which people gain a livelihood. Included is a study of the laws of supply and demand and the principles bearing upon production, exchange, distribution, and consumption both in relation to the individual enterprise and to society at large.

Prerequisite: None.

## ECO 104 Economics

3 0 3

Greater depth in principles of economics, including a penetration into the composition and pricing of national output, distribution of income, international trade and finance, and current economic problems.

Prerequisite: ECO 102.

## T-ECO 108 Consumer Economics

3 0 3

Designed to help the student use his resources of time, energy, and money to get the most out of life. It gives the student an opportunity to build useful skills in buying, managing his finances, increasing his resources, and to understand better the economy in which he lives.

Prerequisite: None.



## T-ECO 109 Consumer Economics 3 0 3

A continuance of Consumer Economics (T-ECO 108) and its integral participation of business enterprise.

Prerequisite: T-ECO 108.

## ECO 111-P Economics in Business and Industry 3 0 3

Basic principles of capitalism, the function of government, the laws of supply and demand, wages, productivity, and the profit motive are stressed. Group Discussions (conference method) are used frequently to fully explore the subject matter.

## ECO 201 Labor Economics and Labor Relations 3 2 4

Emphasis is placed on the history of the labor movement in the United States, the development of methods and strategies by labor organizations and management, and the factors of income and economic security. The Workmen's Compensation Act, Equal Employment Opportunity, and other federal legislation is highlighted as part of the lab experience.

## ENGLISH

## ENG 101 Grammar 3 0 3

Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situation in industry and social life.

Prerequisite: None.

## ENG 102 Composition 3 0 3

Designed to aid the student in the improvement of self-expression in business and technical composition. Emphasis is on the sentence, paragraph and whole composition.

Prerequisite: ENG 101.

## ENG 103 Report Writing 3 0 3

The fundamentals of English are utilized as a background for the organization and techniques of modern report writing. Exercises in developing typical reports, using writing techniques and graphic devices are completed by the students. Practical application in the preparation of a full-length report is required of each student at the end of the term. This report must have to do with something in his chosen curriculum.

## ENG 204 Oral Communication 3 0 3

A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention is given to conducting meetings, conferences, and interviews.

Prerequisite: ENG 101.



ENG 205 Oral Communications for Supervisors 3 0 3

A step-by-step guide is used for supervisors to follow in helping them overcome fear and self-consciousness when addressing a group. Emphasis is placed on attitude and diction, as basics for effective communications. Particular attention is given to the use of flip charts and chalkboard in conducting meetings.

ENG 206 Business Communication 3 0 3

Develops skills in techniques in writing business communications. Emphasis is placed on writing action — getting sales letters and prospectuses. Business reports, summaries of business conferences, letters involving credit, collections, adjustments, complaints, orders, acknowledgements, remittances, and inquiry.  
Prerequisite: ENG 102.

INDUSTRIAL SCIENCE

ISC 102 Industrial Safety 3 2 4

Management and supervisory responsibility for accident and fire prevention. Accident reports. Machine guards. Protective equipment (personal), the first aid department. Safety instruction as part of the job. Use of safety committees. Provisions of the Federal Occupational Health and Safety Act. Safety and housekeeping observation tours and injury investigations are utilized as lab experiments.

ISC 120 Principles of Industrial Management 3 2 4

The basic managerial decisions; organizational structure including plant location, building requirements, and internal factory organization; problems of factory operation and control, planning, scheduling, routing factory production, stores control, labor control, purchasing, cost control. Plant problems are utilized as lab experiments.  
Prerequisite: None.

ISC 129-P Instructor Training 3 2 4

This course provides the industrial supervisor with an approved method of instruction based on basic principles of learning. The emphasis is how to teach either the individual or a small group the related technology or manipulative skills of his trade. Conducting a safety meeting and teaching a particular task to an individual are utilized as part of the lab experience.

ISC 151-P Work Experience I 0 15 5

Supervised work experience in selected industry. Lines of authority, functions of departments, and work discipline are stressed.

ISC 152-P Work Experience II 0 15 5

Supervised work experience in industry. Day-to-day supervisory duties such as time keeping, assignment of work, and achieving production goals are stressed.

ISC 153-P Work Experience III 0 15 5

Supervised work experience in industry. Emphasis is placed on the supervisor's role in producing a quality product. Relationship between quality and job security.

- |   |  |   |   |   |
|---|--|---|---|---|
| ISC 202   | Quality Control                        | 3 | 2 | 4 |
| Principles and techniques of quality control. Organization and procedures. Sampling inspections, process control and tests for significance are stressed.   |  |   |   |   |
| ISC 204   | Value Analysis                         | 3 | 0 | 3 |
| The modern concept in the control of manufacturing production. This course will provide the students an opportunity to study a production system with the specific purpose of identifying unnecessary costs. The objective of the concepts and techniques of value analysis is to make possible a degree of effectiveness in identifying and removing unnecessary cost by the use of sound decisions through a common sense approach.   |  |   |   |   |
| Prerequisite: None.   |  |   |   |   |
| ISC 205-P   | Industrial First Aid                   | 3 | 0 | 3 |
| This course gives the basics of first aid treatment techniques to supervision who will be confronted with injuries likely to occur in the work area. Also covered are the temporary treatment of sudden illnesses, attacks and seizures on the job. The multi-media method of instruction developed by AT & T is utilized for this worthwhile course.   |  |   |   |   |
| ISC 207   | Foremanship Supervision                | 3 | 2 | 4 |
| The foreman's responsibility for planning, organizing, directing, controlling, and coordinating supervisory activities. It teaches the supervisor the basic functions of an organization and his responsibility in carrying out the objectives in accordance with the organization's plan. Included in the course are such topics as establishing lines of authority, functions of departments of units, duties and responsibilities, policies and procedures, and rules and regulations. |  |   |   |   |
| Prerequisite: BUS 272.  |  |   |   |   |
| ISC 209   | Plant Layout                           | 3 | 2 | 4 |
| A practical study of factory planning with emphasis on the most efficient arrangement of work areas to achieve lower manufacturing costs. Effective management of men, money and materials in a manufacturing operation.  |  |   |   |   |
| ISC 210   | Job Analysis and Evaluation            | 3 | 2 | 4 |
| This course is designed to familiarize the supervisor with techniques necessary to gather facts about the specific operations and responsibilities of the job, what it entails, such as mental ability, skills, and physical requirements.  |  |   |   |   |
| ISC 211-P   | Work Simplification and<br>Measurement | 3 | 2 | 4 |
| Principles of work simplification including administration of job methods improvement, motion study fundamentals and time study techniques. Use of flow and process charts, multiple activity charts, operation charts, flow diagrams and methods evaluation.   |  |   |   |   |
| Prerequisite: ISC 210.  |  |   |   |   |
| ISC 218-P   | Plant Security                         | 3 | 2 | 4 |
| The organization and function of the plant security force is reviewed. Items covered include: entrance procedures, petty thievery of company owned materials, parking lot security, use of firearms in emergency situations, disaster preparedness, and handling of bomb scares. Observation of plant security personnel in the performance of their many and varied duties is utilized as the lab experience.  |  |   |   |   |



ISC 219-P Fire Brigade303

The organization and duties of an industrial plant fire brigade are reviewed. The role of the supervisor as a fire brigade officer is stressed. The use of fire extinguishers, reporting fires, disaster evacuation, and organization are covered in detail.

ISC 220 Management Problems303

A study of personnel and production problems from the standpoint of the executive. Includes selection and development of products, control problems and techniques, development of standards, employee-employer relations, developing the executive staff. Case studies are utilized.  
Prerequisites: BUS 233, BUS 272, ISC 120.

ISC 231 Manufacturing Cycles505

Purchasing and distribution costs; consumption patterns, channels of distribution; wholesaling, shipping and warehousing: pricing, government regulation of competition.

ISC 232-P The Suggestion and Awards Program303

Many industries successfully take advantage of employee ideas to improve production, costs, quality, safety, and morale. This course will review typical suggestion programs and possible adaptation to needs of local industry.

ISC 251-P Management Internship I0155

The work experience is expanded to include emphasis on the role of the first line supervisor as a member of the management team.

ISC 252-P Management Internship II0155

The work experience is expanded to include the role of management at all levels to simplify work and reduce costs. A specific cost reduction project is included in this internship.

ISC 253-P Management Internship III0155

The work experience is expanded to include a practical study and review of personnel and production problems from the standpoint of the executive.

MATHEMATICS

MAT 101 Technical Mathematics505

The real number system is developed as an extension of natural numbers. Number systems of various bases are introduced. Fundamental trigonometric concepts and operations are introduced. The application of these principles to practical problems is stressed.  
Prerequisite: Satisfactory evidence that admission requirements have been met.

MAT 102 Technical Mathematics505

A continuation of T-MAT 101. Advanced algebraic and trigonometric topics including quadratics, logarithms, determinants, progressions, the binominal expansion, complex numbers, solution of oblique triangles and graphs of the trigonometric functions are studied in depth.  
Prerequisite: MAT 101.



MAT 103 Technical Mathematics 5 0 5

The fundamental concepts of analytical geometry, differential and integral calculus are introduced. Topics included are graphing techniques, geometric and algebraic interpretation of the derivative, differentials, rate of change, the integral and basic integration techniques. Applications of these concepts to practical situations are stressed.

Prerequisite: MAT 102.

MAT 110 Business Mathematics 5 0 5

This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business.

Prerequisite: None.

## MECHANICS

MEC 101 Machine Processes 2 4 4

An introductory course designed to acquaint the student with basic hand tools, safety procedures and machine processes of our modern industry. It will include a study of measuring instruments, characteristics of metals and cutting tools. The student will become familiar with the lathe family of machine tools by performing selected operations such as turning, facing, threading, drilling, boring, and reaming.

Prerequisite: None.

MEC 102 Machine Processes 2 4 4

Advanced operations on lathe, drilling, boring and reaming machines. Milling machine theory and practice. Thorough study of the types of milling machines, cutters, jig and fixture devices, and the accessories used in a modern industrial plant. Safety in the operational shop is stressed.

Prerequisite: MEC 101.

MEC 205 Strength of Materials 3 2 4

A study of the principle types of stresses which occur within machine and structure elements subjected to various types of loading. Vector representative of forces, stress-strain curves, factor of safety, and fatigue life are covered.

Prerequisites: PHY 106, MAT 103.

MEC 210 Physical Metallurgy 3 3 4

An introductory course in metallurgy consisting of a study of the properties of metals and alloys. Ferrous and non-ferrous metallurgy is included, with emphasis on equilibrium diagrams, particularly the iron-iron carbon diagram. Metallography practice is introduced to the student. Types of heat treatment are studied and practical lab experience is gained in heat treating.

Prerequisite: PHY 101.

MEC 211 Physical Metallurgy 3 3 4

Properties of metals and alloys, the reaction of metals, diffusion, carburizing, metal bonding, and homogenization; recrystallization and grain growth, age hardening, nitriding, internal oxidation; heat treatment of steel; laboratory experiments and demonstrations.

Prerequisite: T-MEC 210.

MEC 213 Production Planning 3 2 4  
Day-to-day plant forecasting, product planning and control, scheduling, dispatching, routing and inventory control. Actual layouts are utilized for planning and control. Orientation visits to selected industries are part of the lab experience.

MEC 235 Hydraulics and Pneumatics 3 3 4  
The basic theories of hydraulic and pneumatic systems. Combinations of systems in various circuits. Basic designs and functions of circuits and motors, controls, electrohydraulic servomechanisms, plumbing, filtration, accumulators and reservoirs.  
Prerequisite: PHY 102.

## PHYSICS

PHY 101 Physics: Properties of Matter 3 2 4  
A fundamental course covering several basic principles of physics. The divisions included are solids and their characteristics, liquids at rest and in motion, gas laws and applications, temperature, heat, and thermal properties. Laboratory experiments and specialized problems dealing with these topics are part of this course.  
Prerequisite: None.

PHY 102 Physics: Work, Energy, Power 3 2 4  
Major areas covered in this course are force, motion, work, energy, and power. Units of measurement and their applications are a vital part of this course. A practical approach is used in teaching students the use of essential mathematical formulas.  
Prerequisite: PHY 102.

PHY 103 Physics: Electricity 3 2 4  
Basic theories of electricity, type of electricity, methods of production, and transmission and transforming of electricity. Electron theory, electricity by chemical action, electricity by friction, electricity by magnetism, induction voltage, amperage, resistance, horsepower, wattage, and transformers are major parts of the course.  
Prerequisites: MAT 101, PHY 101.

PHY 106 Applied Mechanics 5 0 5  
Concepts and principles of statics. Parallel concurrent and noncurrent force systems in coplanar and noncoplanar situations. Concepts of centroids and center of gravity, moments of inertia.  
Prerequisites: MAT 103, PHY 101.

## PSYCHOLOGY

PSY 133-P Creative Thinking 3 0 3  
This course is designed to improve attitudes and abilities of supervisors to fully utilize creative potential, to develop a greater curiosity in problem solving, and to gain open-mindedness towards the ideas of others.



## PSY 206 Applied Psychology

3 0 3

A study of the principles of psychology that will be of assistance in the understanding of inter-personal relations on the job. Motivation, feelings, and emotions are considered with particular reference to on-the-job problems. Other topics investigated are employee selection, supervision, job satisfaction, and industrial conflicts. Attention is also given to personal and group dynamics so that the student may learn to apply the principles of mental hygiene to his adjustment problems as a worker and a member of the general community.

Prerequisite: None.

## PSY 125-P Art of Motivating People

3 0 3

The importance of motivation to meet production needs is stressed. Feelings and emotions are considered with particular reference to on-the-job problems. Other topics investigated are employee selection, job satisfaction, and industrial conflicts.

## PSY 126-P Science of Human Relations

3 2 4

This course is concerned with the fundamentals of human relations. Items stressed include: the importance of getting the facts, basis for decisions, and taking preventive action. Application of the 4-step problem solving methods to a plant situation is utilized as the lab experience.

## TEACHER ASSISTANT

## TAI 101P The Role of The Teacher

## Assistant

3 0 3

An introductory survey course for the teacher assistant. Emphasis is placed on the history of auxiliary personnel in the school, the organization of the school and community, in addition to the various responsibilities of the teacher assistant.

## TAI 102P Basic Communication Skills

5 0 5

This course is primarily concerned with basic oral and written expression. A thorough review of English grammar will be the primary objective. Students will also study punctuation, spelling, sentence structure, simple paragraph development, and outlining.

## TAI 103P Audiovisual Aids Instruction

3 0 3

Advantages, limitations and practical classroom applications of audiovisual materials. The use of models, maps, charts, slides, filmstrips, recordings and motion pictures are stressed.

## TAI 104P Child Growth and Development

5 0 5

Development of the normal child and adolescent. Attention is focused on the social, cultural and biological influences upon growth.

## TAI 105P Reading Techniques

5 0 5

Students will spend time in development of their own reading skills and learn fundamental phonics necessary to aid in a remedial reading program.



TAI 106P Fundamentals of Mathematics	5	0	5
This course will be a general review of elementary mathematics, including common fractions and decimal fractions; also interest, percentages, discount, and other related mathematics.			
TAI 107P Visual Aids Techniques	2	3	3
Course designed to develop skill in use of tape recorder, motion picture projector, and other audiovisual aids.			
TAI 108P Personal Typewriting	2	3	3
This course will be a study of the touch system of typewriting and the application of the basic skills for typing business letters, reports, and tabulated problems.			
TAI 109P Basic Communications	3	0	3
Designed to promote effective communication through correct language usage in speaking and writing.			
TAI 110P Teacher Assistant Internship	0	20	5
This course should service to introduce both the assistant and the teacher to the teacher assistant program in operation. Each participant will be placed in a school and work under the direction of county, city, or federal officials responsible for assistant programs.			
TAI 111P Teacher Assistant Internship	0	20	5
Continuation of training in a school under the direction of county, city, or federal officials responsible for assistant programs.			
TAI 112P Teacher Assistant Internship	0	20	5
Continuation			
TAI 113P Professional Development	2	2	3
Designed to help the student recognize the importance of physical, intellectual, social, and emotional dimensions of personality. Emphasis is placed on poise, grooming and methods of personal improvement.			
TAI 114P Writing Skills (Cursive & Manuscript)	3	0	3
A study of the elements of cursive and manuscript skills, with emphasis on instructional methods and techniques used in elementary schools.			
TAI 115P Oral Communications	3	0	3
A study of basic concepts and principles of oral communications to enable the student to communicate with others. Emphasis is placed on the speaker's attitude, improving diction, voice, and the application of particular techniques of theory to correct speaking habits and to produce effective oral presentation. Particular attention given to conducting meetings, conferences, and interviews.			
TAI 116P Grammar	3	0	3
Designed to aid the student in the improvement of self-expression in grammar. The approach is functional with emphasis on grammar, diction, sentence structure, punctuation, and spelling. Intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life.			

TAI 201P Physical Education Activities	2	3	3
This course is designed to teach the student various types of indoor and outdoor games and sports appropriate for elementary and grammar grade school children.			
TAI 202P School Records and Reports	3	0	3
The preparation of school records and reports. The course will include the procedures for general reports, the procedures for special reports and records, and the management of records.			
TAI 203P Visual Aids Techniques	3	0	3
Continuation. Student will learn to make transparencies, stencils, and spend additional time in operation of audio-visual machines.			
TAI 204P Music and Arts	3	0	3
An introductory study of the fundamentals of music and art, with primary concentration on using these skills in the elementary school system.			
TAI 205P Personal Development	5	0	5
Course is designed to create in student an awareness of the part personal appearance plays in job success. Posture, hair care, make-up, and dress will be given consideration.			
TAI 206P Language Arts and Skills	3	2	3
A practical approach to the use of the English language to communicate in depth.			
TAI 207P Business Mathematics	3	0	3
This course stresses the fundamental operations and their application to business problems. Topics covered include payrolls, price marking, interest and discount, commission, taxes, and pertinent uses of mathematics in the field of business.			
TAI 208P Language Arts	3	0	3
A study of techniques used to communicate deeper than merely the written word.			
TAI 209P Library Materials and Resources	3	0	3
Information concerning books and materials; basic factors and problems in selection; the use of books and libraries as resources for instructional materials.			
TAI 210P Teacher Assistant Internship	0	20	5
Continuation			
TAI 211P Teacher Assistant Internship	0	20	5
Continuation			
TAI 212P Teacher Assistant Internship	0	20	5
Continuation			
TAI 213P Creative Activities	3	0	3
Designed to aid the student in learning activities which make up the normal childhood playlife of younger children. Practical experiences in materials and methods. Group games and rhythms appropriate to school age children.			



## TAI 214P Applied Educational Psychology 3 0 3

This course is specifically designed to aid the prospective teacher assistant in gaining an understanding of the basic psychological principles which will place him in a favorable position in dealing with the varied classroom situations. It particularly emphasizes the intellectual, social, emotional, physical factors of growth and development as these relate to the learning process.

## TAI 215P First Aid and Hygiene 3 0 3

Class time will be spent in a study of principles of healthy living, methods of disease prevention, body care and the study of first aid.

## TAI 216P The School 3 0 3

This course provides an introduction to the fundamental principles in education. It includes a historical view, aims and methods of education, the curriculum, the pupil population, the educative process, and teaching as an occupation. American public education is explored, with special emphasis and consideration given to the organization and operation of the public schools of North Carolina.

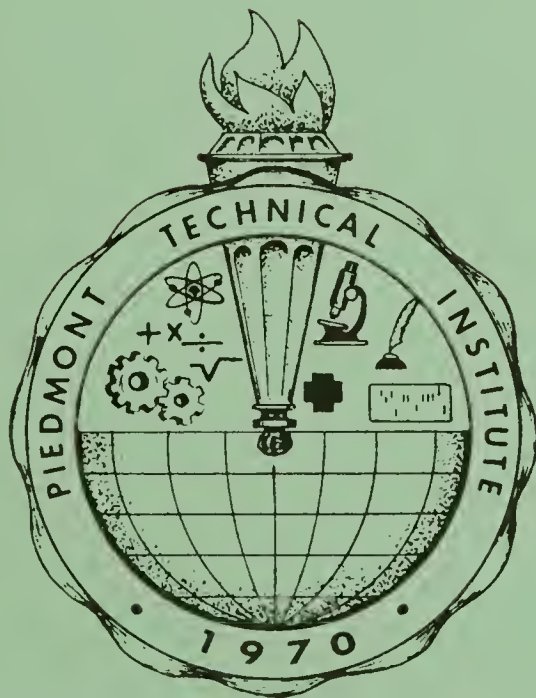
## TAI 217P The Community 3 0 3

A study of the structure of a typical community and how it relates to the school system.





# DIPLOMA PROGRAMS



INDIVIDUALIZED INSTRUCTION FOR ALL

CATALOG FOR 1972-1974

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## SYSTEMS APPROACH AND DIPLOMA PROGRAMS

Piedmont Technical Institute offers a number of programs leading to a diploma in a skilled or semi-professional occupation. These programs are offered at traditional schools as three or four quarter one-year programs. At Piedmont Tech, the student may enroll any day of the year and begin working toward meeting the diploma requirements at his own learning pace. There is not set time limit for individual courses, since each student will be working at his own pace. The length of time from the date of enrollment to the completion of all diploma requirements is entirely up to the student.

## COURSE SELECTION UNDER THE SYSTEMS APPROACH

Each student and his advisor will plan a program of study to meet the student's career plans, as well as the requirements for graduation. This will vary from one individual to another, so no attempt is made to outline a required or suggested curriculum. This will be done when the student meets with his advisor prior to registration and his needs are determined.

Students register for a sequence of courses selected from those described in this catalog. The course objectives for each course are systematically mastered as the student progresses through his curriculum program. The time each student spends in class varies with the individual, but, in all cases, the objectives of each course must be mastered before the student registers for the next sequence course.

Remember, time is not important. What is important is that the student enjoys 100% success, not failure, at every step during his course of study.

## GRADING UNDER THE SYSTEMS APPROACH

Grades are not determined by the student's progress at the end of eleven weeks, but by the student successfully completing a course, regardless of the day of the year the course is finished. At Piedmont Tech, a student does not just put in hours, he masters course objectives. Course credit, however, is awarded on the basis of quarter hours..

## AUTOMOTIVE MECHANICS, V-003

### Purpose of Curriculum

This curriculum provides a training program for developing the basic knowledge and skills needed to inspect, diagnose, repair or adjust automotive vehicles. Manual skills are developed in practical shop work. Thorough understanding of the operating principles involved in the modern automobile comes in class assignments, discussion, and shop practice.

Complexity in automotive vehicles increases each year because of scientific discovery and new engineering. These changes are reflected not only in passenger vehicles, but also in trucks, buses and a variety of gasoline-powered equipment. This curriculum provides a basis for the student to compare and adapt to new techniques for servicing and repair as vehicles are changed year by year.

### Job Description

Automobile mechanics maintain and repair mechanical, electrical, and body parts of passenger cars, trucks, and buses. In some communities and rural areas they also may service tractors or marine engines and other gasoline-powered equipment. Mechanics inspect and test to determine the causes of faulty operation. They repair or replace defective parts to restore the vehicle or machine to proper operating condition. They use shop manuals and other technical publications.

Automotive mechanics in smaller shops usually are general mechanics qualified to perform a variety of repair jobs. A large number of automobile mechanics specialize in particular types of repair work. For example, some may specialize in repairing only power steering and power brakes, or automatic transmissions. Usually such specialists have an all-round knowledge of automotive repair and may occasionally be called upon to do other types of work.



## CHILD CARE, V-067

### Purpose of Curriculum

There is presently an acute shortage of personnel prepared to work with the preschool child. With many mothers of young children returning to the labor market, the number of young children in out-of-the-home care is increasing rapidly. Recent studies have re-emphasized the importance of fostering optimal development during the early years of life. The challenge to our society today is to provide facilities in which the capacities of these young children will be given an opportunity for full development. This will require that these facilities be staffed by warm, knowledgeable people with a sincere interest in the well-being and potential of each child.

The curriculum has been designed for maximum flexibility so that it can be offered as a full-time curriculum or as a sequence of extension courses. Depending upon the need in a specific community, it can be offered for pre-employment or for upgrading personnel already working in child care facilities. Scheduling, therefore, will be dependent upon administrative decisions on the type of course to offer, upon the needs of potential students, and upon their availability for classroom attendance.

Enrollees must have the basic skills needed to profit from instruction and the verbal skills needed for effective communication with young children. Personal attributes are of prime importance for assuming the responsibilities of caring for young children: patience, warmth and understanding in relations with others; imagination; a sense of humor; good physical health and stamina; a positive outlook; emotional stability; willingness and ability to follow directions; and the ability to deal with emergencies. Needless to say, such workers should like and enjoy small children. At this time, it appears desirable that enrollment be on the basis of interest and personal qualifications, provided educational achievement has been sufficient to develop basic skills.

Classroom learnings include theoretical topics, demonstration of practical applications, and student discussions to promote understanding of a developmental philosophy toward early childhood.

In choosing facilities for student field experiences, consideration is given to whether each will support classroom learnings. The facilities selected should demonstrate the application of developmental concepts of child care and should provide opportunities for students to participate in activities for a variety of age levels.

### Job Description

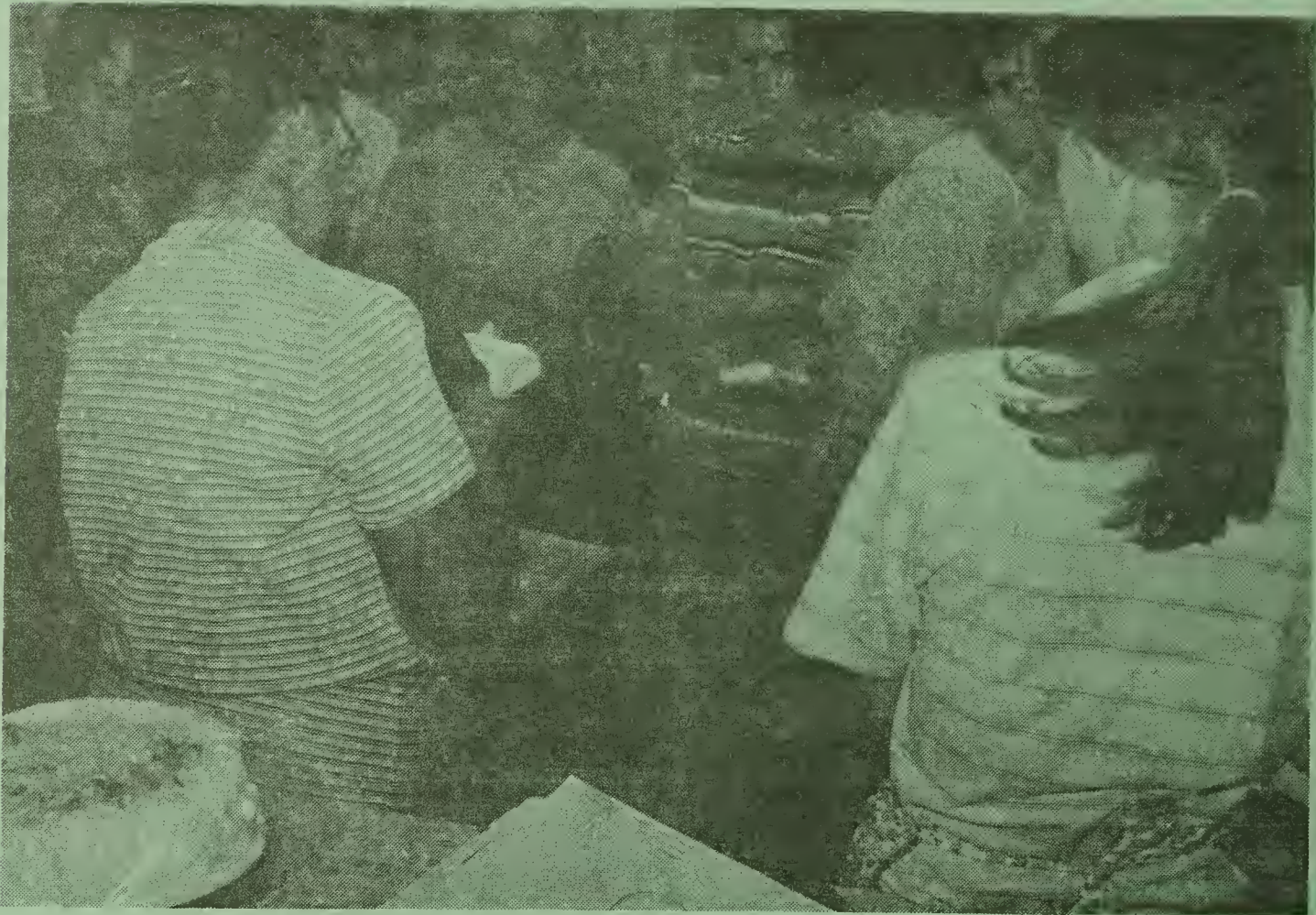
The child care worker assists professional personnel in implementing a planned program of activities. This requires understanding of a wide variety of activities: materials to be prepared, how to assist children to participate, and how to care for materials at the completion of an activity. The worker must be able to perform these functions and carry out routine procedures while continuously observing the children and relating to each according to his needs.

Child care workers must be prepared to apply developmental concepts to child care, teaching desirable behavior and guiding each child in habit formation, health practices, and individual and group activities according to the needs of each and according to his level of development.

The interpersonal skills require theoretical knowledge of early childhood, skill in relating to a wide variety of personalities, warmth, patience, sympathy, interest in children, and the ability to accept others without judgmental attitudes.

Graduates of this basic course may find employment in day care centers, nursery schools, kindergartens, child development centers, hospitals, institutions, camps and recreation centers. With appropriate in-service training, graduates could be prepared to assist professional personnel in centers for children with developmental handicaps-----the emotionally disturbed, the retarded, or the physically disabled.







## CLOTHING CONSTRUCTION AND DESIGN, V-069

### Purpose of Curriculum

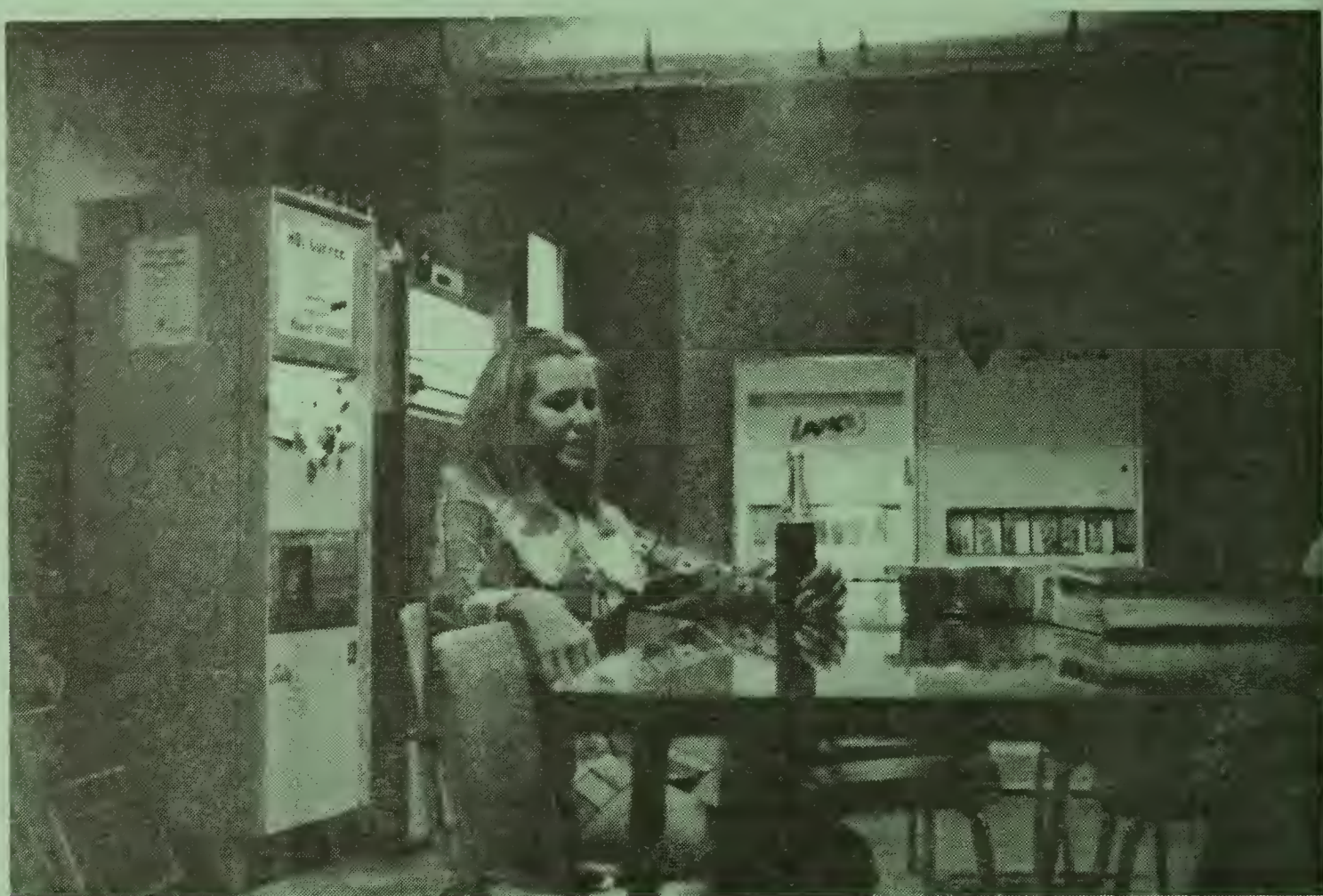
1. Develop a proficiency in all phases of clothing construction, from selection of pattern and fabric to the completed garment including cutting, fitting, pressing, finishing, as well as actual sewing techniques and uses of equipment.
2. Be able to determine pattern size and yardage requirements.
3. Be able to advise as to style and color for individual clothing selection.
4. Be able to design and fashion garments.
5. Develop skills in improving personal appearance through the practice of good health habits and good grooming.
6. Develop skills in selecting, using, and caring for equipment.
7. Develop skills in altering and repairing clothing.

### CAREER OPPORTUNITIES

This curriculum is designed to prepare students for entering employment in clothing services occupations. The course would include training for semi-skilled jobs such as saleslady in a department store in piece goods, ready-to-wear, household goods, cosmetics, etc.; a seamstress in her own home, alterations, and repairs, and interior decorator's assistant.

### EMPLOYMENT OPPORTUNITIES

Graduates should be able to find work in department stores, ladies dress shops, dry cleaners, institutions and industries.





## COSMETOLOGY, V-009

### Purpose of Curriculum

Today the cosmetologist is called upon to advise men and women on problems of make-up, diet, and care of the hair, skin and hands, including the nails. Cosmetology has become a science consisting of the use of cosmetics based on scientific principles. The Cosmetology Curriculum is designed to prepare the student for employment in the field of cosmetology. The curriculum provides instruction and practice in manicuring, shampooing, permanent waving, facials, massages, scalp treatments, hair cutting and styling. This curriculum is approved by the North Carolina State Board of Cosmetic Art Examiners.

### Job Description

A trained beautician is in constant demand. He or she can find employment in the many beauty shops found in every community. A cosmetologist performs many functions in providing beauty services for customers. Some of the functions are: manicuring, shampooing, permanent waving, facials, scalp treatments, hair styling, bleaching, and other services demanded of a beautician.

### Curriculum Description

The Cosmetology Curriculum requires a total of 54 credit hours to graduate. This would, under ideal conditions, give the student 1320 contact hours. The North Carolina State Board of Cosmetic Art Examiners requires a minimum of 1200 contact hours before the student can apply for the licensing examination.

In order to provide for the student who wishes to continue in advance cosmetology and gain enough contact hours to qualify in other states, an optional quarter is available which consists of 18 more credit hours and 440 more contact hours.



## ELECTRICAL INSTALLATION AND MAINTENANCE, V-018

### Purpose of Curriculum

The rapid expansion of the national economy and the increasing development of new electrical products is providing a growing need for qualified people to install and maintain electrical equipment. By mid-1960 more than 350,000 were employed as either construction electricians or maintenance electricians. Between 5,000 and 10,000 additional tradesmen are required each year to replace those leaving the industry. It is expected that the total requirements for electrical tradesmen will reach 700,000 by 1971. The majority of the electrical tradesmen today are trained through apprenticeship or on-the-job training programs.

This curriculum guide will provide a training program in the basic knowledge, fundamentals, and practices involved in the electrical trades. A large portion of the program is devoted to laboratory and shop instruction which is designed to give the student practical knowledge and application experience in the fundamentals taught in class.

### Job Description and Requirements

The graduate of the electrical trades program will be qualified to enter an electrical trade as an on-the-job trainee or apprentice, where he will assist in the planning, layout, installation, check out, and maintenance of systems in residential, commercial, or industrial plants. He will have an understanding of the fundamentals of the National Electrical Code regulations as related to wiring installations, electrical circuits, and the measurements of voltage, current, power, and power factor of single and polyphase alternating circuits. He will have a basic knowledge of motor and motor control systems; industrial electronic control systems; business procedures, organization, and practices, communicative skills; and the necessary background to be able to advance through experience and additional training through up-grading courses offered in the center.

## INDUSTRIAL ELECTRICAL MAINTENANCE

### Purpose of Curriculum

The purpose of this program is to afford the student an opportunity for extended study. To enter this program, the student must have a diploma in Electrical Installation and Maintenance or its equivalent. This program is designed with unique features to allow the student to go to school and be employed at the same time. This is accomplished by using an internship program in lieu of school lab hours so that a student may continue his study and his job. This approach helps fill the need for skill training and educational upbuilding.

## MASONRY, V-070

### Purpose of Curriculum

Masons are the craftsmen in the building trades that work with brick, concrete block, stone and the like. During the past few years there has been a steady increase in the demand for these craftsmen. As building construction continues to increase, the demand for masons will also increase.

This curriculum is designed to train the individual to enter the field of masonry with the basic skills necessary to get the job done. These skills include a basic understanding of mathematic and blueprint reading, as well as methods used in laying out a masonry job to meet residential, commercial and industrial standards.

Most employment opportunities for masons are found with contractors, but many masons are self-employed.

### Job Description

Masons are employed in the field of construction to lay bricks and blocks made of concrete, tile, glass, gypsum, or terra cotta. They are also called on to build or repair walls, partitions, arches, sewers, furnaces and other masonry structures.

After gaining experience, it is possible to advance to the position of foreman, inspector or become a contractor.



## PRACTICAL NURSING, V-038

### Purpose of Curriculum

The accelerated growth of population in North Carolina and rapid advancement in medical technology demand an increased number of well-trained personnel for health services. Realizing this need, the North Carolina Department of Community Colleges in conjunction with local hospitals, administers programs of practical nurse education throughout the state.

The aim of the Practical Nurse Education Program is to prepare qualified persons for participation in care of patients of all ages, in various states of dependency, and with a variety of illness conditions.

Throughout the one-year program the student will acquire knowledge and understanding related to nursing, biological, and social sciences and to develop skills related to nursing practice, communications, inter-personal relations, and use of good judgment.

Graduates of accredited programs of practical nurse education will take the licensing examinations given by the North Carolina Board of Nursing. This examination is given twice each year, usually in April and September. A passing score entitles the individual to receive a license and to use a legal title "Licensed Practical Nurse." The license must be renewed annually. The Licensed Practical Nurse can apply for a license in other states on the basis of a satisfactory examination score, without repeating the examination.

### Job Description

The LPN is prepared to function in a variety of situations: hospitals of all types, nursing homes, clinics, doctors' and dentists' offices and, in some localities, public health facilities. In all situations the LPN functions under supervision of a registered nurse and/or licensed physician. This supervision may be minimal in situations where the patient's condition is stable and not complex; or it may consist of continuous direction in situations requiring the knowledge and skills of the registered nurse or physician. In the latter situation, the LPN may function in an assisting role in order to avoid assuming responsibility beyond that for which the one-year program can prepare the individual.

Job requirements for the Licensed Practical Nurse include suitable personal characteristics, ability to adapt knowledge and understandings of nursing principles to a variety of situations, technical skills for performance of bedside nursing, appreciation for differences of people and for the worth of every individual, a desire to serve and help others, and readiness to conform to the requirements of nursing ethics and hospital policies.

## WELDING, V-050

### Purpose of Curriculum

This curriculum was developed to fill the tremendous need for welders in North Carolina. The recently completed Manpower Survey shows quite clearly that many welders will be needed annually to fill present and projected vacancies in the State.

The content of this curriculum is designed to give students sound understanding of the principles, methods, techniques and skills essential for successful employment in the welding field and metals industry.

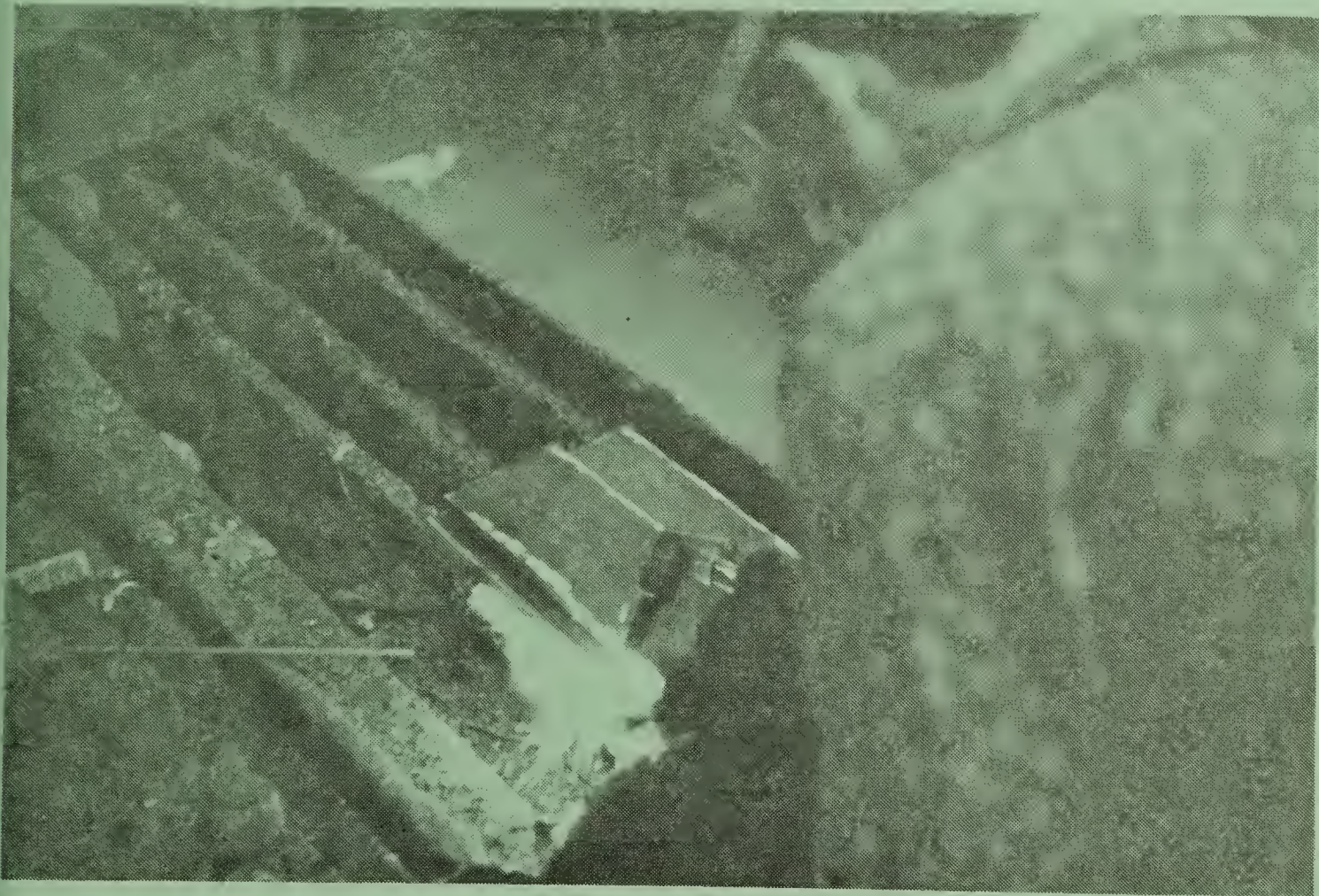
The field of welding offers a person prestige, security and a future of continuous employment with steady advancement. It offers employment in practically any industry: shipbuilding, automotive, aircraft, guided missiles, railroads, construction, pipe fitting, production shop, job shop and many others.

### Job Description

Welders join metals by applying intense heat, and sometimes pressure, to melt the edges to form a permanent bond. Closely related to welding is "oxygen cutting." Of the more than 35 different ways of welding metals, arc, gas, and resistance welding are the three most important.

The principal duty of the welder using manual techniques is to control the melting by directing the heat from either an electric arc or gas welding torch, and to add filler metal where necessary to complete the joint. He should possess a great deal of manipulative skill with a knowledge of jigs, welding symbols, mathematics, basic metallurgy, and blueprint reading.







## COURSE DESCRIPTIONS: DIPLOMA

## AIR CONDITIONING AND REFRIGERATION

	HRS	LAB	CREDIT
AHR 1101 Automotive Air Conditioning	2	3	3
General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system.			
Prerequisite: PHY 1102.			

## AUTOMOTIVE

AUT 1101 Internal Combustion Engine	3	12	7
Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of internal combustion engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication; and methods of testing, diagnosing and repairing.			
Prerequisite: None.			

AUT 1102 Engine Electrical and Fuel Systems	5	12	9
A thorough study of the electrical and fuel systems of the automobile. Battery cranking mechanism, generator, ignition, accessories and wiring; fuel pumps, carburetors, and fuel injectors. Characteristics of fuels, types of fuel systems, special tools, and testing equipment of the fuel and electrical system.			
Prerequisite: None.			

AUT1121 Braking Systems	3	3	4
A complete study of various braking systems employed on automobiles and light weight trucks. Emphasis is placed on how they operate, proper adjustment, and repair.			
Prerequisite: PHY 1102.			

AUT 1123 Automotive Chassis and Suspension Systems	3	9	6
Principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension, and steering systems. Units to be studied will be shock absorbers, springs, steering systems, steering linkage, and front end alignment.			
Prerequisite: PME 1102.			

AUT 1124 Automotive Power Train Systems	3	9	6
Principles and functions of automotive power train systems: clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Identification of troubles, servicing, and repair.			
Prerequisites: PHY 1102, AUT 1123.			

AUT 1125 Automotive Servicing	3	9	6
Emphasis is on the shop procedures necessary in determining the nature of troubles developed in the various component systems of the automobile. Troubleshooting of automotive systems, providing a full range of experiences in testing, adjusting, repairing, and replacing.			
Prerequisites: AUT 1123, AUT 1121, AHR 1101, AUT 1101, AUT 1102.			

BUSINESS

BUS 1103 Small Business Operations	3	0	3
An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventory, layout of equipment and offices, methods of improving business, and employer-employee relations.			
Prerequisite: None.			
BUS 1105 Industrial Organizations	3	0	3
Methods, techniques, and practices of modern management in planning, organizing and controlling operations of a manufacturing concern. Introduction to the competitive system and the factors constituting product cost.			
Prerequisite: None.			

COSMETOLOGY

COS 1155P Cosmetology I	7	0	7
Introduction to Cosmetology and Human Relations. Study of sanitation and sterilization. Theory of the skin, scalp and hair. Cosmetics for the scalp and hair.			
COS 1156P Cosmetology Lab II	0	33	11
Demonstrations and practice in basic hairstyling, hair pressing, thermal waving and curling, shampooing, hair rinses and hair shaping. The application of scientific methods and principles in chemical hair relaxing and cold waving. Introduction to hair color.			
COS 1165P Cosmetology II	7	0	7
Theory of light therapy and massage. Disorders of the skin, scalp and hair. Study of the nail. Introduction to anatomy concerning the structure and function of bones, muscles, and nerves applied to facial and scalp treatments. Cosmetics for the skin and face.			
COS 1166P Cosmetology Lab II	0	33	11
The application of scientific principles in manicuring. Hair and scalp types, treatments and products. Methods and techniques in applying hair color. Special considerations in hair shaping, hair styling, hair pressing, thermal waving and curling.			
COS 1175P Cosmetology III	7	0	7
Chemistry in the beauty salon. Electricity for cosmetologists. Introduction to Beauty Salon Management and Salesmanship. A continuation of anatomy with increased emphasis on application to cosmetology procedures.			
COS 1176P Cosmetology Lab III	0	33	11
Demonstrations and practice in methods of hair removal, care and styling of wigs and hair pieces and make-up. Modern trends and special effects in hair shaping and styling, hair color, thermal waving and curling.			

COS 1185P Cosmetology IV 7 0 7

Psychology for Cosmetologists. Profitable public relations and personal development. A continuation of salesmanship with increased emphasis on the fundamentals of selling. Opportunities in Beauty Culture and the study of Cosmetology jurisprudence.

COS 1186P Cosmetology Lab IV 0 33 11

Demonstrations and practice in hair design and facial harmony, brushing techniques, modern techniques in cold waving. Salon methods and procedures.

## DRAFTING

DFT 1101 Schematics and Diagrams:

Power Mechanics 0 3 1

Interpretation and reading of schematics and diagrams. Development of ability to read and interpret blueprints, charts, instruction and service manuals, and wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures, and notes.

Prerequisite: None.

DFT 1104 Blueprint Reading Mechanical 0 3 1

Interpretation and reading of blueprints. Information on the basic principles of the blueprint; lines, views, dimensioning procedures and notes.

Prerequisite: None.

DFT 1110 Blueprint Reading:

Building Trades 0 3 1

Principles of interpreting blueprints and trade specifications common to the building trades. Development of proficiency in making three view and pictorial sketches.

Prerequisite: None.

DFT 1111 Blueprint Reading & Sketching 0 3 1

Principles of interpreting blueprints and specifications common to the building trades. Practice in reading details for grades, foundations, walls, elevations, chimneys, fireplaces, arches and cavity wall construction. Development of proficiency in making three view and pictorial sketches.

Prerequisite: DFT 1110.

DFT 1112 Blueprint Reading & Sketching 0 3 1

Designed to develop abilities in reading complex drawings in the masonry field. Blueprints of residential and commercial buildings will be studied with emphasis on the plot plan, floor plan, basement and/or foundation plan, walls and various detailed drawings of masonry work.

Prerequisite: DFT 1111.

DFT 1113 Blueprint Reading: Electrical 0 3 1

Interpretation of schematics, diagrams and blueprints applicable to electrical installations with emphasis on electrical plans for domestic and commercial buildings. Sketching schematics, diagrams, and electrical plans for electrical installations using appropriate symbols and notes according to the applicable codes will be a part of this course.

Prerequisite: DFT 1110.



DFT 1117	Blueprint Reading: Welding	0	3	1
<p>A thorough study of trade drawings in which welding procedures are indicated. Interpretation, use and application of welding symbols, abbreviations, and specifications.</p> <p>Prerequisite: DFT 1104.</p>				
DFT 1118	Pattern Development Sketching	0	3	1
<p>Continued study of welding symbols; methods used in layout of sheet steel; sketching of projects, jigs and holding devices involved in welding. Special emphasis is placed on developing pipe and angle layouts by the use of patterns and templates.</p> <p>Prerequisite: None.</p>				

EDUCATION

EDU 1001	The Nature and Scope of Day Care for Young Children	5	0	5
<p>Designed to promote understanding of the role and responsibilities of day care workers. Classroom activities include study of personal adjustment, the developmental sequence in infancy and childhood, and needs of young children for optimal intellectual, emotional, and social development. The importance of the adult-child relationship is emphasized throughout the course.</p> <p>Prerequisite: None.</p>				
EDU 1002	Health and Safety of Young Children	5	0	5
<p>Designed to promote understanding of factors which influence physical and emotional health during infancy and childhood. Classroom activities focus on practices and procedures for promoting good health among children in group care. The influence of child care workers on health and safety and on the teaching of health habits is emphasized throughout the course.</p> <p>Prerequisite: EDU 1001.</p>				
EDU 1003	Creative Activities for Young Children	5	3	6
<p>Designed to promote appreciation for the importance of a varied program of activities for young children and to develop understanding of types of activities which should be provided in a group care facility. Classroom activities include discussion of media and techniques, experimentation with various media, and participation in planning activity programs for different age groups.</p> <p>Prerequisite: EDU 1002.</p>				
EDU 1004	Field Experience in Child Care Facilities	0	6	2
<p>Designed to provide opportunities for students to apply classroom learnings to observation of young children and to participate in their care under the supervision of the teacher. Experience in various types of child care facilities will be related to classroom learnings through assignments, group discussions, and conferences. This course outline is intended to indicate the experiences needed to reinforce learnings of EDU 1001, EDU 1002, and EDU 1003. Satisfactory performance in EDU 1004 is required for completion of the basic pre-employment course for child care workers.</p> <p>Prerequisite: EDU 1003.</p>				

## EDU 1005 Working with the Young Child 3 9 6

An introduction to the relationship of developmental stages to behavior patterns, with emphasis on those methods of interacting with children which promote healthy progress from one developmental stage to the next. Discussions and assignments are designed to develop insight into the student's own attitudes and biases, as a basis for self-understanding and increased capacity for relating to children and adults effectively.

Prerequisite: EDU 1001.

EDU 1006 Communicating Effectively with  
the Young Child 3 0 3

Study of language development in relation to adult models and the child's early experiences. Remedial approaches to improving the student's oral communication, in order to serve as an effective model. Case studies provide opportunities to analyze problems of adult-child communication and to derive guidelines for establishing effective communication patterns with young children.

Prerequisite: EDU 1001.

EDU 1007 Music in the Early Childhood  
Program 2 3 3

Study of music which is appropriate for young children and ways of integrating music into the total program of activities. Students learn to utilize a wide variety of materials for rhythm, instrumental performance, and dramatic play. Laboratory sessions provide opportunities for learning songs and developing extensive files; field experience provides opportunities to participate in and evaluate music activities for various age groups.

Prerequisite: EDU 1003.

EDU 1008 Science in the Early Childhood  
Program 2 3 3

Study of those scientific facts, concepts, and phenomena that are of interest to young children. Laboratory experiences provide opportunities to carry out simple experiments in which young children could participate. Each student will plan a science program which could be used as an integral component of the overall program for young children in group care.

Prerequisite: EDU 1003.

EDU 1009 Art in the Early Childhood  
Program 2 3 3

Study of art media in relation to the creative process in young children, of the educational component that each medium reinforces, and of the ways a variety of low-cost art activities can be incorporated into a program for young children. Laboratory sessions provide first-hand experience with all of the media, opportunities to explore the uses of each, and practice in the care and storage of materials. Each student will plan a meaningful sequence of art activities which could be incorporated into a program for young children.

Prerequisite: EDU 1003.



EDU 1010 Working with the Young Child  
with Problems

3            9            6

Further study of behavior in relation to developmental stages, with emphasis on behavior which is symptomatic of emotional or physical handicaps. Case studies and field observations are utilized for analysis of problems commonly encountered in group situations. Effective interaction and other types of remedial help are explored. Behavior of the child care worker is analyzed as a possible factor in contributing to or alleviating maladjustment, with focus on the importance of constructively utilizing an analytic approach to self-development and to improved interpersonal skills.

Prerequisite: EDU 1005.

EDU 1011 Conceptual and Language  
Development

3            0            3

Study of means for helping children develop in their ability to communicate and to formulate concepts about their environment. Emphasis is on utilization of all facets of the program to reinforce concept development and to increase vocabulary through stimulation of oral communication. Reading assignments and recordings of children's speech provide opportunities to study speech development, to establish realistic expectations and to identify children with needs for special attention to language development.

Prerequisite: EDU 1006.

EDU 1012 Literature in the Early Childhood  
Program

3            0            3

Study of literature for young children, with emphasis on criteria for evaluating the literary value of children's books. Extensive reading and development of a topical file provide resources for selection of appropriate materials to use in field practice, to develop skill in oral reading and in story telling.

Prerequisite: EDU 1006.

EDU 1013 Parent Education

3            0            3

Designed to develop understanding of the rewards and difficulties of parents. Role playing provides opportunities to practice ways of working with parents through home visits, individual conferences, informal conversations, and group meetings. The relationship of the child care facility to other community agencies is explored, including ways each can best serve children and their families. Emphasis is given to the responsibility of child care workers to know about community resources, to be sensitive to needs of parents, and to help parents become aware of and utilize services of the community.

Prerequisite: EDU 1001.

EDU 1014 Administration and Supervision  
in a Preschool Facility

3            0            3

Designed to assist students to develop a philosophy of preschool education which can serve as a guide in establishing policies and procedures for the operation of a center for group care of young children. Emphasis is given to principles of supervision and techniques for promoting acceptance of a philosophy by the total staff.

Prerequisite: EDU 1001.

EDU 1015 Group Care of Infants

3            0            3

Study of development from birth to age three and of the problems specific to group care of children under 3. Each student will develop a plan of care for a group of 5 children; the plan must reflect concern for the child's total development and show procedures for dealing with the practical problems of providing safe care for infants and toddlers.

Prerequisites: EDU 1001 and EDU 1002.



## ELECTRICITY

ELC 1112-P Direct and Alternating Current      5      12      9  
(or 16\*)

Elementary principles of electricity including: Basic electric units; Ohm's Law; basic network theorems, magnetism, basic principles of vacuum tubes and transistors; alternators and generators; basic electrical measuring instruments; capacitance and inductance.

ELC 1113-P Alternating and Direct Machines      5      12      9  
and Controls      (or 16\*)

Principles of direct and alternating current motors; types and characteristics; batteries; series and parallel resonant and non-resonant circuits analysis, filter systems and also the principles of power transformers and magnetic circuits.

ELC 1124 Residential Wiring      5      9      8  
(or 12\*)

Provides instruction and application in the fundamentals of blueprint reading, planning, layout, and installation of wiring in residential applications such as: services, switchboards, lighting, fusing, wire sizes, branch circuits, conduits, National Electrical Code regulations in actual building mock-ups. Prerequisites: ELC 1113, DFT 1110.

ELC 1125 Commercial and Industrial      5      12      9  
Wiring      (or 16\*)

Layout, planning, and installation of wiring systems in commercial and industrial complexes, with emphasis upon blueprint reading and symbols, the related National Electrical Codes, and the application of the fundamentals to practical experience in wiring, conduit preparation, and installation of simple systems.

Prerequisites: ELN 1118, ELC 1124.

ELC 1127-P Instrumentation      5      0      5

Broad introduction to the use of electro-mechanical and electronic circuits and equipment. Provides an understanding of the methods, techniques, and skills required for installation, service, and operation of a variety of control systems. Includes an analysis of sensing devices for detecting changes in pressure, temperature, humidity, electricity, sound, and light, and the associated circuitry and indicating and recording devices.

ELC 1128-P Electrical Analysis and      3      0      3  
Maintenance

An introduction to troubleshooting techniques of common problems of direct current and alternating current machines, transformers, circuit breakers and regulators. Emphasis will be on scheduling of maintenance, lubrication and principles of plant maintenance.

ELC 1129-P      0      20      5

ELC 1130-P Electrical Internship      0      20      5

A program of supervised on-the-job training is required to supplement the classroom instruction and theory. The student gains hands-on experience in lieu of on-campus laboratory experience.

ELC 1132-P	3	0	3
ELC 1133-P Heating Systems I and II	3	0	3

This course deals with all types of oil burners and accessories, installation procedures, control systems, service and maintenance. In addition, it covers central piping systems, modern combustion chambers, water level and feed controls, new types of oil fired burners and recent advances in control mechanisms.

ELC 1134-P	3	0	3
ELC 1135-P Air Conditioning I and II	3	0	3

The theory of refrigeration and air conditioning, step-by-step methods of calculating heat gains, size of cooling systems, installation, servicing, and also covers troubleshooting the unit, its components and controls.

### ELECTRONICS

ELN 1118 Electronic Components	3	6	5
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A study in depth of the electrical characteristics of vacuum tubes, special purpose tube, transistors, semiconductor diodes and special transistor types also including miscellaneous semiconductor devices.

ELN 1119 Electronic Circuits	3	6	5
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A study of circuits of power supplies, amplifiers, oscillators, and various circuits used in home, industry, communications, and in computers are examined. This is done to provide the student with an overall view of the subject that will serve as a sound basis for further study.

ELN 1126-P Electrical Controls and Circuits	5	0	5
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An introduction to control systems for acceleration, speed and braking. Alternating current contactors and relays; drum controllers; wye-delta starters; over load and over voltage protection and sensing devices.

ELN 1131-P Industrial Electronic Systems	3	0	3
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A study in depth of electronics and components as applied to a production system, particular emphasis will be placed on commercial and industrial circuits and devices, so that the student can associate the theoretical aspects of automation and control with equipment in actual use. In addition, reactors, transducers, gating and switching, servomechanisms, magnetic amplifiers and appropriate circuiting will be covered. An introduction to computer systems will also be given.

### ENGLISH

ENG 1101 Reading Improvement	2	0	2
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Designed to improve the student's ability to read rapidly and accurately. Special machines are used for class drill to broaden the span of recognition, to increase eye coordination and word group recognition and to train for comprehension in larger units.  
Prerequisite: None.

ENG 1102 Communication Skills	3	0	3
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Designed to promote effective communication through correct language usage in speaking and writing.  
Prerequisite: ENG 1101.







## HEALTH

HEA 1101 Grooming and Cosmetics 2 2 3

The care and use of makeup, wigs, and dress for business.

Prerequisite: None.

## HOME ECONOMICS

HEC 1101 Clothing Construction I 2 8 6

A study and practice of the parts of machine - use and care -, body measurement, pattern selection to suit figure, pattern marking, reading and understanding guide, and construction of simple garment.

Prerequisite: None.

HEC 1102 Clothing Construction II 2 8 6

A study and practice of construction of garments, use of buttonhole worker and zig zag machines, pattern adjustments to suit figure faults, machine adjustments - materials, threads, tensions -, accessories, scarfs, belts, collars, cuffs, decorative trims.

Prerequisite: Clothing Construction I.

HEC 1103 Clothing Construction III 2 8 6

A study and practice in creative design, construction of coats, suits, etc., lining of garments, using fake fur, leather, velvet, and techniques for different kinds of knits.

Prerequisite: Clothing Construction II.

HEC 1104 Art and Clothing Design 3 0 3

A study of color and design theories and their relation to fabrics and their selection.

Prerequisite: None.

HEC 1105 Modeling 1 2 2

A course in figure control, stance, carriage, and posture.

Prerequisite: None.

HEC 1106 Sewing Equipment 3 0 3

The study of machines and equipment for home and commercial use. Cutting boards, scissors, sewing machines, pressing equipment, tailors chalk, and their care.

Prerequisite: None.

HEC 1107 Textiles (Consumer) 3 0 3

The study of the identification, manufacturing, properties of fabrics in relation to their care and serviceability.

Prerequisite: None.

HEC 1108 Clothing for the Family 2 4 4

Study of clothing selection and construction for children and adults, both men and women.

Prerequisite: None.

HEC 1109 Alterations 1 4 3

Men's and women's clothes, replace zippers, cuffs, coat, suit and skirt hems, waistline adjustments, pockets, and sleeves, (coats and skirts).

Prerequisite: None.

## HEC 1110 Custom Made Home Furnishings 1 4 3

The construction of slip covers, dust ruffles, draperies, bedspreads, pillows, curtains, and lamp shades.

Prerequisite: None.

## HEC 1111 Internship in Clothing Constructing 0 15 3

This course consists of one quarter of supervised cooperative work experience of approximately eleven weeks at fifteen hours each week, or approximately 165 total hours awarding three quarter hours credit. The objective of this course is to provide the student - before graduation from Clothing Constructing and Design - a working practice in an environment in which he will experience after graduation and upon employment. This period of time will enable the student to use the equipment and perform the processes and services required of his specialty under close supervision and with responsibilities commensurate with his capabilities. The cooperative work experience period will be carefully planned and closely supervised by both the educational institution where the student is enrolled and the agency or business where the student is employed. An official agreement among the educational institution, the student, and the agency or business will provide for a programmed sequence of activities to be performed by the student with supervisory responsibilities for the educational elements of the work clearly defined.

Prerequisite:

## HEC 1112 Retailing of Clothing 3 0 3

A course in basic sales techniques relative to the clothing industry.

Prerequisite: None.

## INDUSTRIAL PRACTICES

## IND 1101 Industrial First Aid 3 0 3

A study of the basic first aid treatment techniques for personnel who need to be prepared for injuries likely to occur on the job. In addition, temporary treatment of sudden illnesses, attacks, and seizures are presented. This course utilized multi-media materials developed by American Telephone and Telegraph Co. and is by the American Red Cross.

## IND 1102 Principles of Supervision 5 0 5

Introduces the basic responsibilities and duties of the supervisor and his relationship to supervisors, associates, and subordinates. Methods of supervision are stressed. Attention is also given to self-evaluation and improvement of individual performance.

## FIRST QUARTER

## FIRST QUARTER

MAS 1101	Bricklaying	5	15	10
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The history of the bricklaying industry. Clay and shell brick, mortar, laying foundations, laying bricks to a line, bonding, and tools and their uses. Laboratory work will provide training in the basic manipulative skills.  
Prerequisite: None.

## SECOND QUARTER

MAS 1102	Bricklaying	5	15	10
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Designed to give the student practice in selecting the proper mortars, layout, and construction of various building elements such as foundations, walls, chimneys, arches and cavity walls. The proper use of bonds, expansion; strips, wall ties and caulking methods are stressed.

Prerequisite: MAS 1102.

## THIRD QUARTER

MAS 1103	General Masonry	5	15	10
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Layout and erection of reinforced grouted brick masonry lintels, fireplaces, glazed tile, panels, decorative stone, granite, marble, adhesive terra cotta and modular masonry construction theory and techniques.  
Prerequisite: MAS 1102.

MAS 1113 Masonry Estimating	3	3	4
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This is a practical course in quantity "take off" from prints of the more common type jobs for bricklayers and masons. Figuring the quantities of materials needed and costs of building various components and structures. Prerequisite: MAS 1103.

# MATHEMATICS

MAT 1101	Fundamentals of Mathematics	5	0	5
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**Practical number theory.** Analysis of basic operations: addition, subtraction, multiplication and division. Fractions, decimals, powers and roots, percentages, ratio and proportion. Plane and solid geometric figures used in industry; measurement of surfaces and volumes. Introduction to algebra used in trades. Practice in depth.

**Prerequisite:** None.

MAT 1103 Geometry	3	0	3
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Fundamental properties and definitions; plane and solid geometric figures, selected general theorems, geometric construction of lines, angles and plane figures. Dihedral angles, areas of plane figures, volumes of solids. Geometric principles are applied to shop operations.  
Prerequisite: None.

MAT 1112	Building Trade Mathematics	3	0	3
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Practical problems dealing with volumes, weights, ratios;  
Practical problems dealing with volumes, weights, ratios; mensuration; and  
basic estimating practices for building materials.  
Prerequisite: MAT 1101.



MAT 1115 Electrical Mathematics	5	0	5
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A study of fundamental concepts of algebra: basic operations of addition, subtraction, multiplication, and division; solution of first order equations, use of letters and signs, grouping, factoring, exponents, ratios, and proportions; solution of equations, algebraically and graphically; a study of logarithms and use of tables; and introduction to trigonometric functions and their application to right angles; and a study of vectors for use in alternating current.  
Prerequisite: None.

MAT 1116 Electrical Mathematics	5	0	5
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Continuation of MAT 1115.  
Prerequisite: MAT 1115.

MACHINE PROCESSES

MEC 1112 Machine Shop Processes	0	6	2
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To acquaint the student with the procedures of layout work and the correct use of hand and machine tools. Experiences in the basic fundamentals of drill press and lathe operation; hand grinding of drill bits and lathe tools; set-up work applied to the trade.  
Prerequisite: None.

NURSING

	Class Hrs.	Lab. Hrs.	Total Clock Hrs.	Credit Hrs.
NUR 1001 Practical Nursing I	28	2	330	29

Designed to assist students in acquiring the knowledge, understandings, appreciations, and attitudes basic to effective nursing of patients of all ages and backgrounds. Emphasis is on nursing needs arising both from the individuality of the patient and from inability for self-care as a result of a health deviation. Patient-centered studies include analysis of patient needs, both through classroom study of hypothetical patient situations and through planned experiences in the clinical environment. Beginning skills in nursing methods are developed through planned laboratory practice and supervised patient care.

NUR 1002 Practical Nursing II	12	24	396	24
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Designed to introduce the student to deviations from normal, to nursing methods and therapeutic procedures, and to the clinical specialties. Continued patient-centered study, with introduction of the illness condition as an additional source of nursing needs. Increased emphasis on clinical activities and selected patient care.

NUR 1003 Practical Nursing III	12	24	396	24
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Designed to acquaint the student with common illness conditions, related nursing needs and therapeutic methods, and role of the practical nurse in care of patients with specific conditions. Learning situations are selected to illustrate commonalities with a wide variety of similar conditions and to promote student awareness of similarities and differences. Clinical practice emphasizes student experience in care of subacutely ill patients with a wide variety of illnesses, correlated with classroom studies insofar as possible.

Designed to introduce the student to care of patients with complex nursing needs and to the assisting role of the practical nurse in situations requiring judgments based on depth of knowledge. Clinical practice includes supervised care of labor patients and seriously ill adults and children.

3                      2                      4

3                      2                      4

3 0 3

Introduction to the history of oxyacetylene welding, the principles of welding and cutting, nomenclature of the equipment, assembly of units. Welding procedures such as practice in puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead position, brazing, hard and soft soldering. Safety procedures are stressed through the program of instruction in the use of tools and equipment. Students perform mechanical testing and inspection to determine quality of the welds. Prerequisite: None.



**WLD 1121 Arc Welding** 3 12 7

The operation of AC transformers and DC motor generator arc welding sets. Studies are made of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. After the student is capable of running beads, butt and fillet welds in all positions are made and tested in order that the student may detect his weaknesses in welding. Safety procedures are emphasized throughout the course in the use of tools and equipment.

Prerequisite: None.

**WLD 1122 Commercial and Industrial Practices** 3 9 6

Designed to build skills through practices in simulated industrial processes and techniques: sketching and laying out on paper the size and shape description, listing the procedure steps necessary to build the product, and then actually following these directions to build the product. Emphasis is placed on maintenance, repairing worn or broken parts by special welding applications, field welding and nondestructive tests and inspection.

Prerequisites: WLD 1141 and WLD 1142 or WLD 1120 and WLD 1121.

**WLD 1123 Inert Gas Welding** 1 3 2

Introduction and practical operations in the use of inert-gas shield arc welding. A study will be made of the equipment, operation, safety and practice in the various positions. A thorough study of such topics as: principles of operation, shielding gases, filler rods, process variations and applications, manual and automatic welding.

Prerequisites: WLD 1141 and WLD 1142 or WLD 1120 and WLD 1121.

**WLD 1124 Pipe Welding** 3 12 7

Designed to provide practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metal arc welding processes according to Sections VIII and IX of the ASME code.

Prerequisite: WLD 1121 or WLD 1142.

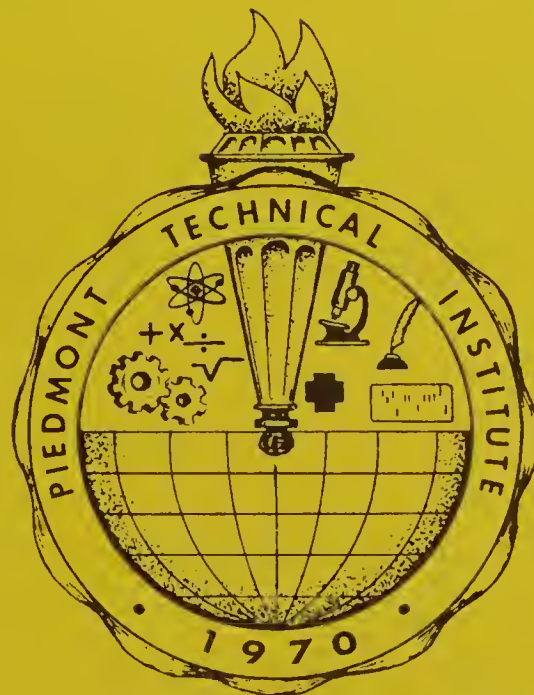
**WLD 1125 Certification Practices** 3 6 5

This course involves practice in welding the various materials to meet certification standards. The student uses various tests including the guided bend and the tensile strength tests to check the quality of his work. Emphasis is placed on attaining skill in producing quality welds.

Prerequisites: WLD 1123 and WLD 1124; WLD 1141 and 1142 or WLD 1120 and WLD 1121.



# NON-CURRICULUM PROGRAMS



WHERE YOU CAN ENROLL REGARDLESS  
OF YOUR EDUCATIONAL BACKGROUND

## CATALOG FOR 1972-1974

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## NON-CURRICULUM PROGRAMS

It is the purpose of Piedmont Technical Institute to afford each individual the opportunity to develop to his fullest potential in whatever vocational and cultural areas he desires.

Another aim is service to area industries, businesses, and public agencies by providing training for their employees.

To obtain these continuing education goals, Career Education Division and the Adult Education Division of the Institute offer an increasing variety of courses and programs. The development of adult programs is based upon the community's particular and varied needs in areas of formal academic learning, cultural advancement, vocational improvement and creative personal interests.

### Admission

Any adult, 18 years of age or older, who is not enrolled in public school is eligible to enroll.

### Fees

The only cost for most classes is for books and materials. Books and supplies are available through the Institute bookstore. When classes meet at neighborhood locations, the Institute bookstore makes it possible for books to be purchased at the class meeting place.

### Class Locations

A number of adult classes are held at Piedmont Technical Institute. Others are conducted at local public schools, community centers, or wherever a suitable meeting place can be arranged. Classes are organized in any community whenever class members indicate an interest, and a qualified instructor is available.



### Attendance

A minimum enrollment of 12 persons is needed to conduct a class. Adults are expected to attend class regularly. Attendance records are maintained by instructors. Insufficient enrollment or attendance will result in cancellation of the class.

### Certificates

Certificates are awarded to students meeting course requirements in the adult classes. Also, a High School Diploma is awarded to adults who successfully complete the high school program.

## ADULT BASIC EDUCATION

Adult Basic education is offered to any adult who has reached the age of eighteen (18) and is not enrolled in the public school who desires to acquire the basic skills of reading, writing, and arithmetic.

Teaching the skills of communication to any undereducated individual eighteen (18) and over is the major purpose of Adult Basic Education. These skills are not meaningful in isolation, so that materials used in these classes are designed especially for adults in terms of subject matter that has the adult interests in mind. For example, family budgeting is used to teach addition,

Teaching the skills of communication to any individual eighteen (18) and over is the major purpose of Adult Basic Education. Classes are designed especially for adults in terms of subject matter that has the adult interests in mind. For example, family budgeting is used to teach addition, subtraction, multiplication, division, computation with fractions, and reading.

Instruction is individualized. The teacher and the student determine where the student is and where he wants to go. Instruction proceeds on that basis in Level I classes or in Level II classes.

Level I (Adult Basic Education) is intended for the individual who has difficulty in reading, writing, and arithmetic.

Level II (Adult Basic Education) is intended for the more advanced individual who has not achieved an eighth grade level of reading ability. At this level much emphasis is placed on arithmetic and the social living skills.





## HIGH SCHOOL DIPLOMA PROGRAM

The Department of Community Colleges in cooperation with the Department of Public Instruction has established procedures for adults to be issued their high school diploma by the local school board upon the recommendation from the Institute that a student has completed the prescribed course of study.

The time required to complete this course of study is determined by several factors such as: (1) The ability of the individual; (2) Individual initiative; (3) Course units earned in the public high schools as shown on an official high school transcript. The courses required for the completion of the high school diploma program are:

- English (Four levels)
- Mathematics
- General Science
- American History
- Government or Civics
- Biology

## HIGH SCHOOL EQUIVALENCY TESTS

Piedmont Technical Institute has been designated as an official testing center for the General Educational Development Tests. To adults who did not previously complete high school, the North Carolina Department of Public Instruction will issue a "Certificate of High School Equivalency" when they meet the following requirements:

1. Make a standard score of 35 or above on each of the five tests and an average standard score of 45 on all five tests.
2. Be nineteen years of age or older (A person 18 years of age may take the tests provided he has not been enrolled in public school for six months).
3. Make application for tests on official application blanks that are available at Piedmont Technical Institute.
4. Pay a testing fee of \$3.00.

Preparation for taking the test can be made through the Learning Laboratory or the Adult High School or Adult Basic Education classes.

Interested persons should contact the Student Personnel Office to obtain information about the time and dates the GED tests will be scheduled.





SPECIAL INTEREST CLASSES

Special Interest Classes are offered by the Institute to afford the opportunity for individuals to develop creative skills, learn hobby activities, or gain personal satisfaction from self advancement. Almost any area of interest can be taught when 12 or more persons have requested a class. Some examples of these courses are:

Algebra	Home Repairs
Drafting	Homeowner Landscaping
Art	Income Tax Preparation
Automotive Tune-Up	Investment & Finance
Bookkeeping	Personality Development
Ceramics	Sewing
Creative Writing	Shorthand
Conversational Spanish or French	Small Engine Repairs
Decoupage	Typing

This list is only a sample of courses that can be offered through Piedmont Technical Institute. Call 599-1181 for more information or to suggest courses you would like to see offered.

## CAREER EDUCATION DIVISION

The Career Education Division of Piedmont Technical Institute arranges classes to fit the needs of industry and business and to provide training desired by employed individuals in the service area. These courses are arranged on demand and are tailored to fit specific needs. Due to the flexibility of these programs, new classes may be initiated when requested by employers or when indicated by surveys, or other means.

The following is a partial list of the many areas of training available:

### SUPERVISORY DEVELOPMENT TRAINING

- Principles of Supervision
- Art of Motivation
- First Aid (Multi-Media)
- Human Relations

### OCCUPATIONAL EXTENSION

- Farm Tractor Tuneup
- Carpentry
- Bricklaying
- Welding
- Automotive Mechanics

### ADULT BASIC EDUCATION/HIGH SCHOOL DIPLOMA

- Grades 1 – 3
- Grades 4 – 6
- Grades 7 – 8
- High School Equivalency
- High School Adult Diploma

### LAW ENFORCEMENT

- Police Defense (firearms)
- Accident Investigation
- Basic Police Course (60 hours)
- Human Relations
- Oral Communications
- Control of Shoplifting

## LAW ENFORCEMENT (Cont'd.)

Fingerprinting  
Auxiliary Police  
Riot Control

## INDUSTRY

Loom Fixing  
Weaving  
Secretarial Upgrading  
Power Sewing  
Sewing Machine Mechanics  
Work Simplification  
Metric System  
Cording  
Spinning  
Twisting  
Fork Lift Truck  
Plant Layout  
Material Handling  
Occupational Health and Safety Act  
Safety Meetings  
Aluminum Applicator  
New Industry Training

## OTHER

Volunteer Firemen  
Secretarial Workshop  
Fire Officer  
Motel Management  
Food Service  
Building Trades Courses

The Career Education Division is well qualified to serve industry and business on a consultant basis to survey and recommend training needs.



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